

# PROCEEDINGS

## AMERICAN SOCIETY OF CIVIL ENGINEERS

DECEMBER, 1954



## INDEX TO PROCEEDINGS

Volumes 76 to 80  
(1950 to 1954)

### BOARD OF DIRECTION

*Copyright 1954 by the AMERICAN SOCIETY OF CIVIL ENGINEERS  
Printed in the United States of America*

**Headquarters of the Society**  
33 W. 39th St.  
New York 18, N. Y.

PRICE \$0.50 PER COPY

## THESE INDEXES

—represent an effort to supply a list of topic headings as a guide to material published since January 1950. Five volume years are included, so designed that they can be cut apart, if desired, and each one assembled with its appropriate year. The author listing has been made complete, including co-authors, discussers, and co-discussers. Subject headings have been greatly restricted, however, under three basic rules:

1. Each paper is listed under one primary heading suggested by the name of the technical divisions of the Society, and under no other subject if that one is sufficient;
2. A secondary listing is used if further classification is considered essential; and
3. A geographic listing (by states only, in the United States, and by foreign countries) is recognized where location is particularly important.

References to discussers of a given paper can be found immediately in the author index under the name of the senior author. Discussion that occurred in more than one calendar year can be traced by referring to the senior author in each successive annual index, as long as that name appears. Typical abbreviations are: Dsc for "discussion," Clo for "closing discussion," Rt for "report," and Chmn for "chairman of the committee preparing the report." All numbers refer to the number of the Proceedings-Separate, no page numbers being included in this index. Such a number appears (in parentheses) following the title of a main paper or following Dsc and Clo in discussions.

---

# AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded November 5, 1852

## ANNUAL INDEX

---

Subject and Author Indexes  
for

PROCEEDINGS

Volume 76 (1950)

Items indexed are identified by months, as follows:

| <u>Month</u> | <u>Number</u>   |
|--------------|---|
| January      | Periodical journal: Vol. 76, No. 1, Part 1. It contains three papers and the discussion of six papers published in prior volumes. |
| February     | Proceedings-Separates Numbers 1 to 5.   |
| March        | Numbers 6 to 10 and D-VII.  |
| April        | Numbers 11 to 15.   |
| May          | Numbers 16 to 20.   |
| June         | Numbers 21 to 25.   |
| July         | Numbers D-XVI, D-XVII, D-XVIII, D-XIX, and D-XX.  |
| August       | Numbers 26 to 30.   |
| September    | Numbers 31 to 35, D-XXII, and D-XXIV.   |
| October      | Numbers 36 to 40 and D-XXVI.  |
| November     | Numbers 41 to 45, D-XXII, D-XXIII, D-XXVIII, D-4, D-5, and D-10.  |
| December     | Numbers 46 to 50, D-XXVII, D-2, D-3, and D-9.   |

---

### SUBJECT INDEX

---

#### AIR TRANSPORT

- "Influence Charts for Concrete Pavements" (12)  
by Gerald Pickett and G. K. Ray
- "Settlement Correction at La Guardia Field" (43)  
by John M. Kyle

#### ALUMINUM

- Dsc (D-XXVI) of "A Study of End Connections for Struts" (Proceedings, Dec 1949) See Holt, Marshall
- "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34) by H. N. Hill and J. W. Clark
- Rt "Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (22) by E. G. Hartmann, Chmn

#### BEAMS

- Dsc (D-VII) of "Deflections of Plywood Beams Due to Moisture Content Change" (Proceedings, April 1949) See Wilson, W. E.
- Dsc (D-XVIII) of "Frequency Analysis of Beam and Girder Floors" (Proceedings, Oct 1949) See Bleich, Hans H.
- "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39) by Bernard L. Weiner
- "Strength of I-Beams in Combined Bending and Torsion" (33) by Basil Soudchikov
- "Successive Approximations for Beams on an Elastic Foundation" (18) by E. P. Popov

#### BRIDGES

- "Maximum Load Capacity of Bailey Bridges" (21) by Robert B. Stegmaier, Jr.
- "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13) by Maurice Barron

#### BURMA

- "Movements in the Desiccated Alkaline Soils of Burma" (Jan) by F. L. D. Wooltorton

#### CHANNELS

- Dsc (Jan) of "Flow Around Bends in an Open Flume" (Proceedings, June 1949) See Shukry, Ahmed
- Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (Proceedings, Nov 1949) See Rouse, Hunter

#### COLUMNS

- Dsc (Jan) of "Applied Column Theory" (Proceedings, June 1949) See Shanley, F. R.
- "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34) by H. N. Hill and J. W. Clark

#### CONCRETE

- Dsc (Jan) of "Light-Weight Pumice Concrete" (Proceedings, June 1949) See Niederhoff, A. E.

## SUBJECT INDEX

### CONSTRUCTION

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Correction of Reservoir Leakage at Great Falls Dam" (Jan) by A. H. Weber
- Dsc (Jan) of "Light-Weight Pumice Concrete" (Proceedings, June 1949) See Niederhoff, A. E.
- "Impossibility of Performance in Contracts for Engineering and Construction" (36) by Robert F. Borg
- "Improvements at the Back River Sewage Works, Baltimore, Md." (1) by C. E. Keefer

### DAMS

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Correction of Reservoir Leakage at Great Falls Dam" (Jan) by A. H. Weber
- Rt "Progress Report of the Subcommittee on Consolidation of Materials in Earth Dams and Their Foundations of the Committee on Earth Dams of the Soil Mechanics and Foundations Division" (48) Robert R. Philippe, Chmn
- "Treatment of Foundations for Large Dams by Grouting Methods" (3) by A. W. Simonds, Fred H. Lippold, and R. E. Keim
- "Uplift Pressures in Concrete Dams" (25) by Kenneth B. Keener

### DRAINAGE

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Comprehensive Plan for the Columbia Basin" (45) by William Whipple
- "Human Aspects of Mexican Irrigation" (46) by Antonio Rodriguez Langone
- "Hydrology of Mexico" (38) by Andrés García-Quintero
- "Operation and Maintenance of Irrigation Systems" (47) by Raymond A. Hill

### EARTHWORK

- "The Geochemistry of Earthwork" (7) by Hyde Forbes

### ECONOMICS

- "Computation of Equitable Charges for Treatment of Municipal Sewage" (15) by Ellis E. Bankson
- "Economic Effects of Reservoir Sedimentation" (30) by William E. Corfitzen
- "Operation and Maintenance of Irrigation Systems" (47) by Raymond A. Hill
- "Public Utility Condemnation Cases in the State of Washington" (2) by Henry L. Gray

### ELECTRONICS

- "Supersonic Sounding Instruments and Methods" (50) by Joseph M. Caldwell

### EUROPE

- "Wind-Load Standards in Europe" (42) by John W. T. Van Erp

### FLOODS

- Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949) See Lane, E. W.

### FOUNDATIONS

- "Design Curves for Footings on Soil" (35) by Winfield A. McCracken

- Dsc (Jan) of "Analysis of Pile Foundations by Batter Piles" (Proceedings, Feb 1949) See Hrennikoff, A.

- Rt "Progress Report of the Subcommittee on Consolidation of Materials in Earth Dams and Their Foundations of the Committee on Earth Dams of the Soil Mechanics and Foundations Division" (48) Robert R. Philippe, Chmn
- "Successive Approximations for Beams on an Elastic Foundation" (18) by E. P. Popov
- "Treatment of Foundations for Large Dams by Grouting Methods" (3) by A. W. Simonds, Fred H. Lippold, and R. E. Keim

### FRAMES

- "Buckling of Rigid-Jointed Plane Trusses" (24) by N. S. Hoff, Bruno A. Boley, S. V. Nardo, and Sara Kaufman
- "Effect of Skew Angle on Rigid-Frame Reactions" (32) by Walter C. Boyer
- "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39) by Bernard L. Weiner
- "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13) by Maurice Barron
- "Slope Deflection Equations for Curved Members" (6) by Keith T. Fowler
- "Three-Dimensional Displacement Diagrams for Space Frame Structures" (20) by Walter Worthington Ewell

### HARBORS

- "Ship Response to Range Action in Harbor Basins" (41) by Basil Wrigley Wilson

### HIGHWAYS

- Dsc (D-XIX) of "Roads and Pavements, Sampson Naval Training Center" (Proceedings, Oct 1949) See Feld, Jacob
- "Influence of Heavy Loads on Pavement Design Trends" (23) by K. B. Woods

### HYDRAULICS

- Dsc (Jan) of "Flow Around Bends in an Open Flume" (Proceedings, June 1949) See Shukry, Ahmed
- Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949) See Lane, E. W.
- Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (Proceedings, Nov 1949) See Rouse, Hunter
- "Economic Effects of Reservoir Sedimentation" (30) by William E. Corfitzen
- "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19) by Edward J. Rutter
- "Long-Term Storage Capacity of Reservoirs" (11) by H. E. Hurst
- "Measurement and Analysis of Suspended Sediment Loads in Streams" (31) by Martin E. Nelson and Paul C. Benedict
- "Retrospection on the Lower Colorado River After 1935" (28) by J. W. Stanley
- "Sedimentation Studies at Conchas Reservoir in New Mexico" (29) by D. C. Bondurant
- "Supersonic Sounding Instruments and Methods" (50) by Joseph M. Caldwell

### HYDROLOGY

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss



# SUBJECT INDEX

## HYDROLOGY

- "Hydrology of Mexico" (38) by Andrés García-Quintero

## IRRIGATION

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Economic Effects of Reservoir Sedimentation" (30) by William E. Corfittzen
- "Human Aspects of Mexican Irrigation" (46) by Antonio Rodríguez Langone
- "Hydrology of Mexico" (38) by Andrés García-Quintero
- "Operation and Maintenance of Irrigation Systems" (47) by Raymond A. Hill

## LEGAL TOPICS

- "Human Aspects of Mexican Irrigation" (46) by Antonio Rodríguez Langone
- "Impossibility of Performance in Contracts for Engineering and Construction" (36) by Robert F. Borg
- "Operation and Maintenance of Irrigation Systems" (47) by Raymond A. Hill
- "Pollution Abatement Policy" (10) by Thomas R. Camp
- "Public Utility Condemnation Cases in the State of Washington" (2) by Henry L. Gray

## LOCKS

- "Design Characteristics of Lock Systems in the United States" (Jan) A symposium of three papers by A. Frederick Griffin, C. E. Blee, and Ralph L. Bloom

## MAPPING

- "Mathematical Analysis of an Aerial Survey" (14) by Lo-Ho

## MARYLAND

- "Improvements at the Back River Sewage Works, Baltimore, Md" (1) by C. E. Keefer

## MECHANICS

- "Buckling of Rigid-Jointed Plane Trusses" (24) by N. C. Hoff, Bruno A. Boley, S. V. Nardo, and Sara Kaufman
- Dsc (Jan) of "Applied Column Theory" (Proceedings, June 1949) See Shanley, F. R.
- Dsc (Jan) of "Flow Around Bends in an Open Flume" (Proceedings, June 1949) See Shukry, Ahmed
- Dsc (D-VII) of "Deflections of Plywood Beams Due to Moisture Content Change" (Proceedings, April 1949) See Wilson, E. W.
- Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949) See Wessman, Harold E.
- Dsc (D-XVIII) of "Frequency Analysis of Beam and Girder Floors" (Proceedings, Oct 1949) See Bleich, Hans H.
- Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949) See Steinman, D. B.
- Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (Proceedings, Nov 1949) See Rouse, Hunter
- "Effect of Skew Angle on Rigid-Frame Reactions" (32) by Walter C. Boyer
- "Elastic Restraint Equations for Semi-Rigid Connections" (5) by J. E. Lothers

- "Influence of Heavy Loads on Pavement Design Trends" (23) by K. B. Woods

- "Large Hyperbolic Functions Computed by Fission" (49) by F. T. Llewellyn
- "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34) by H. N. Hill and J. W. Clark
- "Maximum Load Capacity of Bailey Bridges" (21) by Robert B. Stegmaier, Jr.
- "Plasticity of Metals--Mathematical Theory and Structural Applications" (27) by D. C. Drucker
- "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39) by Bernard L. Weiner
- "Slope Deflection Equations for Curved Members" (6) by Keith T. Fowler
- "Strength of I-Beams in Combined Bending and Torsion" (33) by Basil Sourchnikoff
- "Successive Approximations for Beams on an Elastic Foundation" (18) by E. P. Popov
- "Three-Dimensional Displacement Diagrams for Space Frame Structures" (20) by Walter Worthington Ewell
- "Uplift Pressures in Concrete Dams" (25) by Kenneth B. Keener

## MEXICO

- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Human Aspects of Mexican Irrigation" (46) by Antonio Rodríguez Langone
- "Hydrology of Mexico" (38) by Andrés García-Quintero

## MONTANA

- "Origin and Significance of Openwork Gravel" (17) by Allen S. Cary

## NEW MEXICO

- "Sedimentation Studies at Conchas Reservoir in New Mexico" (29) by D. C. Bondurant

## NEW YORK

- Dsc (D-XIX) of "Roads and Pavements, Sampson Naval Training Center" (Proceedings, Oct 1949) See Feld, Jacob
- "Settlement Correction at La Guardia Field" (43) by John M. Kyle

## NORTH CAROLINA

- Dsc (D-XXIV) of "Diversion Tunnel and Power Conduit of Nantahala Hydroelectric Development" (Proceedings, Dec 1949) See Bleifuss, D. J.

## PAVEMENTS

- Dsc (D-XIX) of "Roads and Pavements, Sampson Naval Training Center" (Proceedings, Oct 1949) See Feld, Jacob
- "Influence Charts for Concrete Pavements" (12) by Gerald Pickett and G. K. Ray
- "Influence of Heavy Loads on Pavement Design Trends" (23) by K. B. Woods
- "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16) by Guthlac Wilson and G. M. J. Williams

## PENNSYLVANIA

- "Computation of Equitable Charges for Treatment of Municipal Sewage" (15) by Ellis E. Bankson

# SUBJECT INDEX

## POLLUTION

- "Industrial Stream Pollution Abatement" (26) by L. L. Hedgepeth
- "Pollution Abatement Policy" (10) by Thomas R. Camp

## POWER

- Dsc (D-XXIV) of "Diversion Tunnel and Power Conduit of Nantahala Hydroelectric Development" (Proceedings, Dec 1949) See Bleifuss, D. J.
- "Economic Effects of Reservoir Sedimentation" (30) by William E. Corfittzen
- "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19) by Edward J. Rutter
- "Origin and Significance of Openwork Gravel" (17) by Allen S. Cary
- "Treatment of Foundations for Large Dams by Grouting Methods" (3) by A. W. Simonds, Fred H. Lippold, and R. E. Keim
- "Uplift Pressures in Concrete Dams" (25) by Kenneth B. Keener

## REPORTS

- Rt "Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (22) E. C. Hartmann, Chmn
- Rt "Progress Report of the Subcommittee on Consolidation of Materials in Earth Dams and Their Foundations of the Committee on Earth Dams of the Soil Mechanics and Foundation Division" (48) Robert R. Philippe, Chmn

## RESERVOIRS

- "Correction of Reservoir Leakage at Great Falls Dam" (Jan) by A. H. Weber
- "Economic Effects of Reservoir Sedimentation" (30) by William E. Corfittzen
- "Construction Technique of Passing Floods Over Earth Dams" (40) by Andrew Weiss
- "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19) by Edward J. Rutter
- "Long-Term Storage Capacity of Reservoirs" (11) by H. E. Hurst
- "Retrosession on the Lower Colorado River After 1935" (28) by J. W. Stanley
- "Sedimentation Studies at Conchas Reservoir in New Mexico" (29) by D. C. Bondurant

## RIVERS

- Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949) See Lane, E. W.
- "Measurement and Analysis of Suspended Sediment Loads in Streams" (31) by Martin E. Nelson and Paul C. Benedict
- "Atchafalaya Diversion and Its Effect on the Mississippi River" (9) by Leo M. Odom
- "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19) by Edward J. Rutter
- "Industrial Stream Pollution Abatement" (26) by L. L. Hedgepeth
- "Long-Term Storage Capacity of Reservoirs" (11) by H. E. Hurst
- "Retrosession on the Lower Colorado River After 1935" (28) by J. W. Stanley
- "Sedimentation Studies at Conchas Reservoir in New Mexico" (29) by D. C. Bondurant

## SANITARY ENGINEERING

- "Computation of Equitable Charges for Treatment of Municipal Sewage" (15) by Ellis E. Bankson

- "Design of Prestressed Tanks" (37) by J. M. Crom
- "Improvements at the Back River Sewage Works, Baltimore, Md." (1) by C. E. Keefer
- "Industrial Stream Pollution Abatement" (26) by L. L. Hedgepeth
- "Pollution Abatement Policy" (10) by Thomas R. Camp

## SOIL MECHANICS

- "Capillary Phenomena in Cohesionless Soils" (4) by T. William Lambe
- "Design Curves for Footings on Soil" (35) by Winfield A. McCracken
- Dsc (Jan) of "Analysis of Pile Foundations by Batter Piles" (Proceedings, Feb 1949) See Hrennikoff, A.
- "Movements in the Desiccated Alkaline Soils of Burma" (Jan) by F. L. D. Wooltorton
- "Origin and Significance of Openwork Gravel" (17) by Allen S. Cary
- "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16) by Guthrie Wilson and G. M. J. Williams
- Rt "Progress Report of the Subcommittee on Consolidation of Materials in Earth Dams and Their Consolidation Foundations of the Earth Dams of the Soil Mechanics and Foundations Division" (48) Robert R. Philippe, Chmn
- "Settlement Correction at La Guardia Field" (43) by John M. Kyle
- "The Geochemistry of Earthwork" (7) by Hyde Forbes
- "The Problem of Wave Action on Earth Slopes" (44) by Martin A. Mason

## STRUCTURAL ENGINEERING

- "Buckling of Rigid-Jointed Plane Trusses" (24) by N. S. Hoff, Bruno A. Boley, S. V. Nardo, and Sara Kaufman
- "Design of Prestressed Tanks" (37) by J. M. Crom
- "Design Systems Characteristics of Lock Systems in the United States" (Jan) A symposium of three papers by A. Frederick Griffin, C. E. Blee, and Ralph L. Bloor
- Dsc (Jan) of "Applied Column Theory" (Proceedings, June 1949) See Shanley, F. R.
- Dsc (Jan) of "Light-Weight Pumice Concrete" (Proceedings, June 1949) See Niederhoff, A. E.
- Dsc (D-VII) of "Deflections of Plywood Beams Due to Moisture Content Change" (Proceedings, April 1949) See Wilson, W. E.
- Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949) See Steinman, D. B.
- Dsc (D-XXVI) of "A Study of End Connections for Struts" (Proceedings, Dec 1949) See Holt, Marshall
- Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949) See Wessman, Harold E.
- Dsc (D-XVIII) of "Frequency Analysis of Beams and Girder Floors" (Proceedings, Oct 1949) See Bleich, Hans H.
- "Effect of Skew Angle on Rigid-Frame Reactions" (32) by Walter C. Boyer
- "Elastic Restraint Equations for Semi-Rigid Connections" (5) by J. E. Lothers
- "Floating Tunnel for Long Water Crossings" (8) by Charles E. Andrew

# SUBJECT INDEX

## STRUCTURAL ENGINEERING

- "Influence of Heavy Loads on Pavement Design Trends" (23) by K. B. Woods
- "Large Hyperbolic Functions Computed by Fission" (49) by F. T. Llewellyn
- "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34) by H. N. Hill and J. W. Clark
- "Maximum Load Capacity of Bailey Bridges" (21) by Robert B. Stegmaier, Jr.
- "Plasticity of Metals--Mathematical Theory and Structural Applications" (27) by D. C. Drucker
- "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39) by Bernard L. Weiner
- "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13) by Maurice Barron
- Rt "Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (22) E. C. Hartmann, Chmn
- "Slope Deflection Equations for Curved Members" (6) by Keith T. Fowler
- "Strength of I-Beams in Combined Bending and Torsion" (33) by Basil Surochnikoff
- "Successive Approximations for Beams on an Elastic Foundation" (18) by E. P. Popov
- "Three-Dimensional Displacement Diagrams for Space Frame Structures" (20) by Walter Worthington Ewell
- "Uplift Pressures in Concrete Dams" (25) by Kenneth B. Keener
- "Wind-Load Standards in Europe" (42) by John W. T. Van Erp

## SURVEYING

- Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949) See Smirnoff, Michael V.
- "Mathematical Analysis of an Aerial Survey" (14) by Lo-Ho

## TANKS

- "Design of Prestressed Tanks" (37) by J. M. Crom

## TENNESSEE

- "Correction of Reservoir Leakage at Great Falls Dam" (Jan) by A. H. Weber

- "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19) by Edward J. Rutter

## TRUSSES

- "Buckling of Rigid-Jointed Plane Trusses" (24) by N. S. Hoff, Bruno A. Boley, S. V. Nardo, and Sara Kaufman
- Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949) See Wessman, Harold E.

## TUNNELS

- Dsc (D-XXIV) of "Diversion Tunnel and Power Conduit of Nantahala Hydroelectric Development" (Proceedings, Dec 1949) See Bleifuss, D. J.
- "Floating Tunnel for Long Water Crossings" (8) by Charles E. Andrew

## WASHINGTON

- "Floating Tunnel for Long Water Crossings" (8) by Charles E. Andrew
- "Origin and Significance of Openwork Gravel" (17) by Allen S. Cary
- "Public Utility Condemnation Cases in the State of Washington" (2) by Henry L. Gray

## WATERWAYS

- "Atchafalaya Diversion and Its Effect on the Mississippi River" (9) by Leo M. Odom
- "Comprehensive Plan for the Columbia Basin" (45) by William Whipple
- "Design Characteristics of Lock Systems in the United States" (Jan) A symposium of three papers by A. Frederick Griffin, C. E. Blee, and Ralph L. Bloor
- "Measurement and Analysis of Suspended Sediment Loads in Streams" (31) by Martin E. Nelson and Paul C. Benedict
- "Ship Response to Range Action in Harbor Basins" (41) by Basil Wrigley Wilson
- "Supersonic Sounding Instruments and Methods" (50) by Joseph M. Caldwell
- "The Problem of Wave Action on Earth Slopes" (44) by Martin A. Mason

## WIND

- "Wind-Load Standards in Europe" (42) by John W. T. Van Erp

# AUTHOR INDEX

- ALLAN, WILLIAM**  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- AMIRIKIAN, ARSHAM**  
"Wedge-Beam Framing" (53)
- ANDREW, CHARLES E.**  
"Floating Tunnel for Long Water Crossings" (8)
- ASLAKSON, CARL I.**  
"Some Aspects of Electronic Surveying" (52)
- BAKHMETEFF, BORIS A.**  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- BANKSON, ELLIS E.**  
"Computation of Equitable Charges for Treatment of Municipal Sewage" (15)
- BARNETT, JOSE H.**  
Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)
- BARON, FRANK**  
"Laterally Loaded Plane Structures and Structures Curved in Space" (51) with James P. Michalos
- BARRON, MAURICE**  
"Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- BAUMANN, PAUL**  
Dsc (D-XXIII) of "High Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)
- BEAN, ELWOOD L.**  
Dsc (D-10) of "Pollution Abatement Policy" (10)
- BENEDICT, PAUL C.**  
See Nelson, Martin E. (31)
- BENJAMIN, JACK R.**  
Dsc (Jan) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XXVI) of "A Study of End Connections for Struts" (Proceedings, Dec 1949)
- BHANDARI, N. N.**  
Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)
- BHOOTA, B. V.**  
See Ippen, Arthur T. (symposium in Proceedings, Nov 1949)  
See Rouse, Hunter (D-XXIII)
- BLAISDELL, FRED W.**  
Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)
- BLEE, C. E.**  
See Griffin, A. Frederick (Jan)  
See Griffin, A. Frederick (D-XXVII)
- BLEICH, FRIEDRICH**  
"Structural Damping in Suspension Bridges" (61)
- BLEICH, HANS H.**  
Dsc of paper in Proceedings, Oct 1949: Robert V. Hauer (D-XVIII)  
Clo (D-XVIII) of "Frequency Analysis of Beam and Girder Floors" (Proceedings, Oct 1949)  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- BLEIFUSS, D. J.**  
Dsc of paper in Proceedings, Dec 1949: Joseph R. Bowman (D-XXIV)  
Clo (D-XXIV) of "Diversion Tunnel and Power Conduit of Nantahala Hydroelectric Development" (Proceedings, Dec 1949)
- BLENCH, T.**  
Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)
- BLESSING, CHARLES A.**  
"Surveying and Mapping Requirements for Modern City Planning" (60)
- BLOOR, RALPH L.**  
See Griffin, A. Frederick (Jan)  
See Griffin, A. Frederick (D-XXVII)
- BOLEY, BRUNO A.**  
See Hoff, N. S. (24)
- BONDURANT, D. C.**  
"Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- BORG, ROBERT F.**  
"Impossibility of Performance in Contracts for Engineering and Construction" (36)
- BOWMAN, JOSEPH R.**  
Dsc (D-XXIV) of "Diversion Tunnel and Power Conduit of Nantahala Hydroelectric Development" (Proceedings, Dec 1949)
- BOYER, WALTER C.**  
"Effect of Skew Angle on Rigid-Frame Reactions" (32)
- BRUIN, JACK**  
Dsc (D-XVI) with H. E. Hudson of "Stream Flow Variability" (Proceedings, Sept 1949)
- CALDWELL, JOSEPH M.**  
"Supersonic Sounding Instruments and Methods" (50)
- CAMP, THOMAS R.**  
"Pollution Abatement Policy" (10)  
Dsc of 10: J. E. McKee and Elwood L. Bean (D-10)  
Clo (D-10) of "Pollution Abatement Policy" (10)

# AUTHOR INDEX

- CARY, ALLEN S.  
"Origin and Significance of Openwork Travel"  
(17)
- CERMAK, JACK E.  
See Peterson, Jr., Dean F. (D-5)
- CHENEY, LLOYD T.  
Dsc (D-5) of "Elastic Restraint Equations for Semi-Rigid Connections" (5)
- CHOW, VEN TE  
Dsc (D-XVI) of "Stream Flow Variability"  
(Proceedings, Sept 1949)
- CHU, KUANG-HAN  
"Truss Deflections by the Coordinate Method"  
(54)
- CLARK, J. W.  
See Hill, H. N. (34)  
See Holt, Marshall (D-XXVI)
- CORFITZEN, WILLIAM E.  
"Economic Effects of Reservoir Sedimentation"  
(30)
- CROES, L. O.  
Dsc (Jan) of "Flow Around Bends in an Open Flume" (Proceedings, June 1949)
- CROM, J. M.  
"Design of Prestressed Tanks" (37)
- DAWSON, JOHN H.  
See Ippen, Arthur T. (symposium in Proceedings, Nov 1949)  
See Ippen, Arthur T. (D-XXIII)
- DOHN, CHARLES W.  
Dsc (XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- DOUMA, J. H.  
Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)
- DRUCKER, D. C.  
"Plasticity of Metals--Mathematical Theory and Structural Applications" (27)
- DRUMMOND, G. B.  
Dsc (Jan) of "Light-Weight Pumice Concrete"  
(Proceedings, June 1949)
- EADES, J. B.  
See Maher, F. J. (D-XX)
- ERP, JOHN W. T. VAN-  
See Van Erp, John W. T. (42)
- EWELL, WALTER WORTHINGTON  
"Three-Dimensional Displacement Diagrams for Space Frame Structures" (20)
- FARQUHARSON, F. B.  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- FELD, JACOB  
Dsc of paper in Proceedings, Oct 1949: P. F. Phelan (D-XIX)  
Clo (D-XIX) of "Roads and Pavements, Sampson Naval Training Station" (Proceedings, Oct 1949)
- FITZGERALD, J. EDMUND  
Dsc (Jan) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)
- FORBES, HYDE  
"The Geochemistry of Earthwork" (7)
- FOSTER, H. ALDEN  
Dsc (D-XVI) of "Stream Flow Variability"  
(Proceedings, Sept 1949)
- FOWLER, KEITH T.  
"Slope Deflection Equations for Curved Members" (6)
- GARCIA-QUINTERO, ANDRÉS  
"Hydrology of Mexico" (38)
- GHASWALA, S. K.  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)  
Dsc (D-XXVI) of "A Study of End Connections for Struts" (Proceedings, Dec 1949)
- GOTTSCHALK, L. C.  
"Measurement of Sedimentation in small Reservoirs" (55)
- GRAY, HENRY L.  
"Public Utility Condemnation Cases in the State of Washington" (2)  
Dsc of 2: H. D. Southerland, Jr. (D-2)  
Clo (D-2) of "Public Utility Condemnation Cases in the State of Washington" (2)
- GREENBERG, H. J.  
"Limit Design of Beams and Frames" (59)  
with W. Prager
- GRIFFIN, A. FREDERICK  
"Design Characteristics of Lock Systems in the United States: A Symposium" (Jan)  
Dsc of Symposium in Jan Proceedings: Basil Standing (D-XXVII)  
Clo (D-XXVII) of "Design Characteristics of Lock Systems in the United States: A Symposium" (Jan)
- HALSEY, JAMES F.  
Dsc (D-9) of "Atchafalaya Diversion and Its Effect on the Mississippi River" (9)
- HARLAND, JAMES W.  
Dsc (D-XXVI) of "A Study of End Connections for Struts" (Proceedings, Dec 1949)
- HART, CLARENCE A.  
Dsc (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)

# AUTHOR INDEX

HARTMANN, E. C.

Re "Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (22)

Dsc (Jan) of "Applied Column Theory" (Proceedings, June 1949)

HAUER, ROBERT V.

Dsc (D-XVIII) of "Frequency Analysis of Beam and Girder Floors" (Proceedings, Oct 1949)

HAWKE, J. P.

Dsc (Jan) of "Light-Weight Pumice Concrete" (Proceedings, June 1949)

HAYS, JAMES B.

Dsc (D-3) of "Treatment of Foundations for Large Dams by Grouting Methods" (3)

HEDGEPEETH, L. L.

"Industrial Stream Pollution Abatement" (26)

HICKERSON, T. F.

Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

HIGGS, JERE W.

Dsc (D-9) of "Atchafalaya Diversion and Its Effect on the Mississippi River" (9)

HILL, H. N.

"Lateral Buckling of Eccentrically Loaded I-Section Columns" (34) with J. W. Clark

HILL, RAYMOND A.

"Operation and Maintenance of Irrigation Systems" (47)

HILTS, H. E.

"Highway Planning in Turkey" (58)

HOFF, N. S.

"Buckling of Rigid-Jointed Plane Trusses" (24) with Bruno A. Boley, S. V. Nardo, and Sara Kaufman

HOLT, MARSHALL

Dsc of paper in Dec 1949 Proceedings: Jack R. Benjamin, James W. Harland, F. P. Shearwood, S. K. Ghaswala (D-XXVI)

Clo (D-XXVI) with J. W. Clark, of "A Study of End Connections for Struts" (Proceedings, Dec 1949)

HRENNIKOFF, A.

Dsc of paper in Proceedings, Feb 1949: George S. Murphy (Jan)

Clo (Jan) of "Analysis of Pile Foundations with Batter Piles" (Proceedings, Feb 1949)

HSU, EN-YUN

See Ippen, Arthur T. (symposium in Proceedings, Nov 1949)

See Rouse, Hunter (D-XXIII)

HUDSON, H. E., Jr.

See Bruin, Jack (D-XVI)

HURST, H. E.

"Long-Term Storage Capacity of Reservoirs" (11)

IPPEN, ARTHUR T.

Dsc of symposium in Proceedings, Nov 1949: Paul Baumann, N. N. Bhandari, T. Blench, Clarence A. Hart, Fred W. Blaisdell, J. H. Douma (D-XXIII)

Clo (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)

ISMAIL, HASSAN M.

"Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56)

JACKSON, M. W.

Dsc (D-VII) of "Deflections of Plywood Beams Due to Moisture Content Change" (Proceedings, April 1949)

JENNING, J. E.

Dsc (D-XXVIII) of "Movements in the Desiccated Alkaline Soils of Burms" (Jan)

KAI LEI

See Lei, Kai (D-XVI)

KAUFMAN, SARA

See Hoff, N. S. (24)

KAVANAGH, THOMAS C.

Dsc (D-5) of "Elastic Restraint Equations for Semi-Rigid Connections" (5)

See Wessman, Harold E. (Jan)

See Wessman, Harold E. (D-XVII)

KAZMANN, RAPHAEL

Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)

KEEFER, C. E.

"Improvements at the Back River Sewage Works, Baltimore, Md." (1)

KEENER, KENNETH B.

"Uplift Pressures in Concrete Dams" (25)

KEIM, R. E.

See Simonds, A. W. (3)

See Simonds, A. W. (D-3)

KLEMIN, ALEXANDER

Dsc (Jan) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)

Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)

KLINGEL, THOMAS R.

Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

KNAPP, ROBERT T.

Clo (D-XXIII) of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)

See Ippen, Arthur T. (symposium in Proceedings, Nov 1949)

KRYNINE, D. P.

Dsc (D-4) of "Capillary Phenomena in Cohesionless Soils" (4)



# AUTHOR INDEX

KUANG-HAN CHU

See Chu, Kuang-Han (54)

KYLE, JOHN M.

"Settlement Correction at La Guardia Field" (43)

LAMBE, T. WILLIAM

"Capillary Phenomena in Cohesionless Soils" (4)

Dsc of 4: M. R. Lewis, Swe-Tze Peng and D. P. Krynlne (D-4)

Clo (D-4) of "Capillary Phenomena in Cohesionless Soils" (4)

LANE, E. W.

Dsc of Paper in Proceedings, Sept 1949: Ven Te Chow, Dana M. Wood, H. Alden Foster, C. S. Ospina and G. Tama, Raphael G. Kazmann, Jack Bruin and H. E. Hudson, Jr., H. W. Lull, William D. Mitchell, C. R. Ownbey, S. P. Wing, J. E. McKee, G. B. Schroyer and E. T. Schuleen (D-XVI)  
Clo (D-XVI) with Kai Lei, of "Stream Flow Variability" (Proceedings, Sept 1949)

LANGONE, ANTONIO RODRIGUEZ

"Human Aspects of Mexican Irrigation" (46)

LEEMING, J. J.

Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

LEI, KAI

See Lane, E. W. (D-XVI)

LEWIS, M. R.

Dsc (D-4) of "Capillary Phenomena in Cohesionless Soils" (4)

LIEBER, PAUL

Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)

LIPPOLD, FRED H.

See Simonds, A. W. (3)

See Simonds, A. W. (D-3)

LLEWELLYN, F. T.

"Large Hyperbolic Functions Computed by Fission" (49)

LO-HO

"Mathematical Analysis of an Aerial Survey" (14)

LOTHERS, J. E.

"Elastic Restraint Equations for Semi-Rigid Connections" (5)

Dsc of 5: Lloyd T. Cheney; Thomas C. Kavanagh; and Dean F. Peterson and Jack E. Cermak (D-5)

Clo (D-5) of "Elastic Restraint Equations for Semi-Rigid Connections" (5)

LULL, H. W.

Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)

MAHER, F. J.

Dsc (D-XX) with J. B. Eades, of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)

MASON, MARTIN A.

"The Problem of Wave Action on Earth Slopes" (44)

MAYER, A.

Dsc (D-3) of "Treatment of Foundations for Large Dams by Grouting Methods" (3)

McCRACKEN, WINFIELD A.

"Design Curves for Footings on Soil" (35)

McKEE, J. E.

Dsc (D-10) of "Pollution Abatement Policy" (10)

Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)

MEYER, CARL F.

Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

MINEAR, V. L.

Dsc (D-3) of "Treatment of Foundations for Large Dams by Grouting Methods" (3)

MICHALOS, JAMES P.

See Baron, Frank (51)

MITCHELL, WILLIAM D.

Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)

MOYER, RALPH A.

Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

MURPHY, GEORGE S.

Dsc (Jan) of "Analysis of Pile Foundations With Batter Piles" (Proceedings, Feb 1949)

NALDER, W. H.

"Design of Irrigation Systems" (57)

NARDO, S. V.

See Hoff, N. S. (24)

NELSON, MARTIN E.

"Measurement and Analysis of Suspended Sediment Loads in Streams" (31) with Paul C. Benedict

NEWELL, JOSEPH S.

Dsc (Jan) of "End Restraints on Truss Members" (Proceedings, Sept 1949)

Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)

NIEDERHOFF, A. E.

Dsc of paper in June 1949 Proceedings: G. B. Drummond and J. P. Hawke (Jan)

ODOM, LEO M.

"Atchafalaya Diversion and Its Effect on the Mississippi River" (9)

Dsc of 9: E. F. Salisbury, James F. Halsey and Jere W. Higgs, Jr. (D-9)

Clo (D-9) of "Atchafalaya Diversion and Its Effect on the Mississippi River" (9)



# AUTHOR INDEX

- OLSON, LAURENCE G.  
See Wilson, W. E. (D-VII)
- OSPINA, C. S.  
Dsc (D-XVI) with G. Tama, of "Stream Flow Variability" (Proceedings, Sept 1949)
- OWNBEY, C. R.  
Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)
- PEERY, DAVID J.  
Dsc (Jan) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- PENG, SWE-TZE  
Dsc (D-4) of "Capillary Phenomena in Cohesionless Soils" (4)
- PETERSON, DEAN F.  
Dsc (D-5) with Jack E. Cermak, of "Elastic Restraint Equations for Semi-Rigid Connections" (5)
- PETERSON, ELMO G.  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- PHELAN, P. F.  
Dsc (D-XX) of "Roads and Pavements, Sampson Naval Training Station" (Proceedings, Oct 1949)
- PHILIPPE, ROBERT R.  
Rt "Progress Report of the Subcommittee on Consolidation of Materials in Earth Dams and Their Foundations of the Committee on Earth Dams of the Soil Mechanics and Foundations Division" (48)
- PICKETT, GERALD  
"Influence Charts for Concrete Pavements" (12) with G. K. Ray
- PINNEY, EDMUND  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- POPOV, E. P.  
"Successive Approximations for Beams on an Elastic Foundation" (18)
- PRAGER, W.  
See Greenberg, H. J. (59)
- QUINTERO, ANDRÉS GARCIA-  
See Garcia-Quintero, Andrés (38)
- RAY, G. K.  
See Pickett, Gerald (12)
- RICHARDSON, EDWARD ADAMS  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- RODRIGUEZ LANGONE, ANTONIO  
See Langone, Antonio Rodriguez (46)
- ROUSE, HUNTER  
Clo (D-XXIII), with B. V. Bhoota and En-Yun Hsu, of "High-Velocity Flow in Open Channels: A Symposium" (four papers in Proceedings, Nov 1949)  
See Ippen, Arthur T. (symposium in Proceedings, Nov 1949)
- RUTTER, EDWARD J.  
"Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- SALISBURY, E. F.  
Dsc (D-9) of "Atchafalaya Diversion and Its Effect on the Mississippi River" (9)
- SAWYER, HERBERT A.  
Dsc (Jan) of "Applied Column Theory" (Proceedings, June 1949)
- SCHROYER, G. B.  
Dsc (D-XVI), with E. T. Schuleen, of "Stream Flow Variability" (Proceedings, Sept 1949)
- SCHULEEN, E. T.  
See Schroyer, G. B. (D-XVI)
- SHANLEY, F. R.  
Dsc of paper in Proceedings, June 1949: Herbert A. Sawyer, Jr. and E. C. Hartmann (Jan)
- SHEARWOOD, F. P.  
Dsc (D-XXVI) of "A Study of End Connections For Struts" (Proceedings, Dec 1949)
- SHUKRY, AHMED  
Dsc of paper in Proceedings, June 1949: L. O. Croes (Jan)
- SIMONDS, A. W.  
"Treatment of Foundations for Large Dams by Grouting Methods" with Fred H. Lippold and R. E. Keim (3)  
Dsc of 3: A. Mayer, V. L. Minear, Byram W. Steele and James B. Hays (D-3)  
Clo (D-3), with Fred H. Lippold and R. E. Keim, of "Treatment of Foundations for Large Dams by Grouting Methods" (3)
- SLAVIN, ABRAHAM  
Dsc (Jan) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)  
Dsc (Jan) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- SMIRNOFF, MICHAEL  
Dsc of paper in Nov 1949 Proceedings: T. F. Hickerson, Thomas R. Klingel, Carl F. Meyer, Joseph Barnett, J. J. Leeming, Allen G. Tyson, Donald Thompson, and Ralph A. Moyer (D-XXII)  
Clo (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)

# AUTHOR INDEX

- SOUROCHNIKOFF, BASIL**  
"Strength of I-Beams in Combined Bending and Torsion" (33)
- SOUTHERLAND, H. D.**  
Dsc (D-2) of "Public Utility Condemnation Cases in the State of Washington" (2)
- STANDING, BASIL**  
Dsc (D-XXVII) of "Design Characteristics of Lock Systems in the United States: A Symposium" (Jan)
- STANLEY, J. W.**  
"Retrospection on the Lower Colorado River after 1935" (28)
- STEELE, BYRAM W.**  
Dsc (D-3) of "Treatment of Foundations for Large Dams by Grouting Methods" (3)
- STEGMAIER, JR., ROBERT B.**  
"Maximum Load Capacity of Bailey Bridges" (21)
- STEINMAN, DAVID B.**  
Dsc of paper in Proceedings, Oct 1949: David J. Peery, Alexander Klemin and Abraham Slavin (Jan)  
Dsc of paper in Proceedings, Oct 1949: David J. Peery, Alexander Klemin, Abraham Slavin, Charles W. Dohn, Boris A. Bakhmeteff, F. J. Maher and J. B. Eades, Edmund Pinney, Harold A. Thomas, Elmo G. Peterson, William Allan, Paul Lieber, S. K. Ghaswala, Peter L. Tea, Edward Adams Richardson, H. H. Bleich, F. B. Farquharson, and George S. Vincent (D-XX)  
Clo (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- SWE-TZE PENG**  
See Peng, Swe-Tze (D-4)
- TAMA, G.**  
See Ospina, C. S. (D-XVI)
- TEA, PETER L.**  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- TELLER, L. W.**  
See Bleich, Friedrich (61)
- THOMAS, HAROLD A.**  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- THOMPSON, DONALD**  
Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)
- TYSON, ALLEN G.**  
Dsc (D-XXII) of "Analytical Method of Determining the Length of Transition Spiral" (Proceedings, Nov 1949)
- VAN ERP, JOHN W. T.**  
"Wind-Load Standards in Europe" (42)
- VINCENT, GEORGE S.**  
Dsc (D-XX) of "Aerodynamic Theory of Bridge Oscillations" (Proceedings, Oct 1949)
- WEBER, A. H.**  
"Correction of Reservoir Leakage at Great Falls Dam" (Jan)
- WEINER, BERNARD L.**  
"Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)
- WEISS, ANDREW**  
"Construction Technique of Passing Floods Over Earth Dams" (40)
- WESSMAN, HAROLD E.**  
Dsc of paper in Proceedings, Sept 1949: Jack R. Benjamin, George Winter, Abraham Slavin, J. Edmund Fitzgerald and Joseph S. Newell (Jan)  
Dsc of paper in Proceedings, Sept 1949: Jack R. Benjamin, George Winter, Abraham Slavin, J. Edmund Fitzgerald, Joseph S. Newell, and Charles W. Dohn (XVII)  
Clo (D-XVII) with Thomas C. Kavanagh, of "End Restraints on Truss Members" (paper in Proceedings, Sept 1949)
- WHIPPLE, WILLIAM**  
"Comprehensive Plan for the Columbia Basin" (45)
- WILLIAMS, G. M. J.**  
See Wilson, Guthlac (16)
- WILSON, BASIL WRIGLEY**  
"Ship Response to Range Action in Harbor Basins" (41)
- WILSON, GUTHLAC**  
"Pavement Bearing Capacity Computed by Theory of Layered Systems" (16) with G. M. J. Williams
- WILSON, W. E.**  
Dsc of paper in Proceedings, April 1949: M. W. Jackson (D-VII)  
Clo (D-VII) of "Deflection of Plywood Beams Due to Moisture Content Change" (Proceedings, April 1949)
- WING, S. P.**  
Dsc (D-XVI) of "Stream Flow Variability" (Proceedings, Sept 1949)
- WINTER, GEORGE**  
Dsc (Jan) of "End Restraints on Truss Members" (Proceedings, Sept 1949)  
Dsc (D-XVII) of "End Restraints on Truss Members" (Proceedings, Sept 1949)
- WINTERKORN, HANS F.**  
Dsc (D-XXVIII) of "Movements in the Desiccated Alkaline Soils of Burma" (Jan)

# AUTHOR INDEX

WOOD, DANA M.

Dsc (D-XVI) of "Stream Flow Variability"  
(Proceedings, Sept 1949)

WOODS, K. B.

"Influence of Heavy Loads on Pavement Design  
Trends" (23)

WOOLTORTON, F. L. D.

"Movements in the Desiccated Alkaline Soils of  
Burma" (Jan)

Dsc of paper in Proceedings, Jan 1950: Hans  
F. Winterkorn and J. E. Jennings (D-XXIII)

Clo (D-XXVIII) of "Movements in the Desiccated  
Alkaline Soils of Burma" (Jan)

---

# AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded November 5, 1852

---

## ANNUAL INDEX

---

Subject and Author Indexes  
for

PROCEEDINGS

Volume 77 (1951)

Items indexed are identified by months, as follows:

Month

January  
February  
March  
April  
May  
June  
July  
August  
September  
October  
November  
December

Number

Proceedings-Separates 51 to 55.  
56 to 60, D-7, and D-XXV.  
61 to 63, D-8, D-11, D-16, D-19, and D-23.  
64 to 66, D-13, D-18, and D-21.  
67 to 71, D-24, D-27, and D-28.  
72 to 76, D-25-K, D-29, and D-32.  
77 to 81.  
82 to 86.  
87 to 89, D-17, D-30, D-33, D-34, D-38, and D-40.  
90 to 96, D-36, D-39, and D-42.  
97 to 105, D-37, and D-47.  
106 to 111, D-49, D-54, and D-61.

---

### SUBJECT INDEX

---

#### AIR TRANSPORT

- "Aircraft Design as Related to Airport Standards" (93) by Milton W. Arnold
- "Base Course Drainage for Airport Pavements" (75) by A. Casagrande and W. L. Shannon
- "Directional Requirements for Airport Runways" (95) by Ralph H. Burke and Harry Otis Wright, Jr.
- D-30 (D-43) of "Settlement Correction at La Guardia Field" (43)
- "Friendship International Airport" (94) by Benjamin Everett Beavin, Sr.
- "Redesign of Major Airport Terminals" (104) by Herbert H. Howell

#### ARCHES

- D-30 (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- D-30 (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)

#### ATOMIC ENERGY

- "Longitudinal Mixing Measured by Radioactive Tracers" (84) by Harold A. Thomas, Jr., and Ralph S. Archibald

#### BEAMS

- "Buckling Stresses for Flat Plates and Sections" (77) by Elbridge Z. Stowell, George J. Heimerl, and Charles Libove
- D-30 (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- D-30 (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)

- "Forced Vibrations of Continuous Beams" (100) by Edward Saibel and Elio D'Appolonia
- "Laterally Loaded Plane Structures and Structures Curved in Space" (51) by Frank Baron and James P. Michalos
- "Limit Design of Beams and Frames" (59) by H. J. Greenberg and W. Prager
- "Wedge-Beam Framing" (53) by Arsham Amirikian

#### BINS

- "Design of Large Coal Bunkers" (72) by Paul Rogers
- "Pressures in a Shallow Rectangular Bin" (82) by Raymond L. Moore and J. R. Shaw

#### BRIDGES

- D-30 (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- D-30 (D-21) of "Maximum Load Capacity of Bailey Bridges" (21)
- D-30 (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)
- "Structural Damping in Suspension Bridges" (61) by Friedrich Bleich and L. W. Teller

#### CALIFORNIA

- "Utilization of Ground Water in California" (102) by T. Russel Simpson

#### CHANNELS

- "Regime Theory for Self-Formed Sediment-Bearing Channels" (70) by Thomas Blench

## SUBJECT INDEX

### CHANNELS

- "River Channel Roughness" (78) by Hans A. Winstein and Nicholas L. Barbarossa
- "Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56) by Hassan M. Ismail

### CITY PLANNING

- "Application of Highway Capacity Research" (101) by J. P. Buckley
- "Friendship International Airport" (94) by Benjamin Everett Beavin, Sr.
- "Highway Planning in Turkey" (58) by H. E. Hilts
- "International Cartography" (68) by Robert H. Randall
- "National Geodesy--Status and Planning" (63) by Leo Otis Colbert
- "National Topographic Mapping" (66) by W. E. Wrathner
- "Planning the National Capital: Objectives and Problems of Attainment" (64) by Ulysses S. Grant, III
- "Principles of Highway Capacity Research" (105) by O. K. Normann
- Rt "Review of Flood Frequency Methods" (110)
- "Surveying and Mapping Requirements for Modern City Planning" (60) by Charles A. Blessing
- "The New Towns Program in Great Britain" (62) by T. C. Coote

### COLUMNS

- Dsc (D-34) of "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34)

### CONCRETE

- Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- Dsc (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)

### CONSTRUCTION

- Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- Dsc (D-40) of "Construction Technique of Passing Floods over Earth Dams" (40)
- "Pettenwell Hydroelectric Project" (81) by E. Montford Fucik
- "Rectification of the Papaloapan River in Mexico" (71) by Reynaldo Schega
- "The New Towns Program in Great Britain" (62) by T. C. Coote

### DAMS

- "Design of Irrigation Systems" (57) by W. H. Nalder
- Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- "Final Foundation Treatment at Hoover Dam" (109) by A. Warren Simonds
- "Pettenwell Hydroelectric Project" (81) by E. Montford Fucik

### DISTRICT OF COLUMBIA

- "Planning the National Capital: Objectives and Problems of Attainment" (64) by Ulysses S. Grant, III

### DRAINAGE

- "Analysis of Ground-Water Lowering Adjacent to Open Water" (106) by Stuart B. Avery, Jr.
- "Base Course Drainage for Airport Pavements" (75) by A. Casagrande and W. L. Shannon
- "Consumptive Use in Municipal and Industrial Areas" (99) by George B. Gleason
- "Consumptive Use in the Rio Grande Basin" (97) by Robert L. Lowry
- "Consumptive Use of Water" (91) by Harry F. Blaney
- "Consumptive Use of Water by Forest and Range Vegetation" (90) by L. R. Rich
- "Consumptive Use of Water on Irrigated Land" (98) by Wayne D. Criddle
- "Design of Irrigation Systems" (57) by W. H. Nalder
- Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- Dsc (D-38) of "Hydrology of Mexico" (38)
- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)
- "Final Foundation Treatment at Hoover Dam" (109) by A. Warren Simonds
- "Ground-Water Movement Controlled Through Spreading" (86) by Paul Baumann
- "Model and Prototype Studies of Sand Traps" (67) by Ralph L. Parshall
- "Regime Theory for Self-Formed Sediment-Bearing Channels" (70) by Thomas Blench
- "Research in Water Spreading" (111) by Dean C. Muckel
- Rt "Review of Flood Frequency Methods: Final Report of the Subcommittee of the Joint Division Committee on Floods" (110) William P. Creager, Chmn
- "Utilization of Ground Water in California" (102) by T. Russel Simpson

### EARTHQUAKES

- "Lateral Forces of Earthquake and Wind" (66) by Arthur W. Anderson, John A. Blume, Henry J. Degenkolb, Harold B. Hammill, Edward M. Knapik, Henry L. Marchand, Henry C. Powers, John E. Rinne, George A. Sedgwick, and Harold O. Sjoberg

### ECONOMICS

- Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)
- "Valuation and Depreciation Related to Income Tax" (69) by Maurice R. Shariff
- "Waterway Traffic on the Great Lakes" (83) by John R. Hardin

### ELECTRONICS

- "Some Aspects of Electronic Surveying" (52) by Carl I. Aslakson

### EUROPE

- Dsc (D-42) of "Wind-Load Standards in Europe" (42)

### FLOODS

- "Design of Irrigation Systems" (57) by W. H. Nalder
- Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)

## SUBJECT INDEX

### FLOODS

- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- "Ground-Water Movement Controlled Through Spreading" (86) by Paul Baumann
- Rt "Review of Flood Frequency Methods: Final Report of the Subcommittee of the Joint Division Committee on Floods" (110) William P. Creager, Chmn
- "Stage Predictions for Flood Control Operations" (79) by Ralph E. King

### FOUNDATIONS

- "Analysis of Ground-Water Lowering Adjacent to Open Water" (106) by Stuart B. Avery, Jr.
- "Base Course Drainage for Airport Pavements" (75) by A. Casagrande and W. L. Shannon
- Dsc (D-7) of "The Geochemistry of Earthworks" (7)
- Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- "Final Foundation Treatment at Hoover Dam" (109) by A. Warren Simonds
- "Pile Foundations for Large Towers on Permafrost" (103) by L. A. Nees

### FRAMES

- Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- Dsc (D-32) of "Effect of Skew Angle on Rigid-Frame Reactions" (32)
- Dsc (D-39) of "Practical Design of Solid-Barrel, Reinforced Concrete Skew Structures" (39)
- "Limit Design of Beams and Frames" (59) by H. J. Greenberg and W. Prager
- "Wedge-Beam Framing" (53) by Arsham Amirikian

### GREAT BRITAIN

- "The New Towns Program in Great Britain" (62) by T. C. Coote

### HIGHWAYS

- "Application of Highway Capacity Research" (101) by J. P. Buckley
- Dsc (D-23) of "Influence of Heavy Loads on Pavement Design Trends" (23)
- "Highway Planning in Turkey" (58) by H. E. Hilts
- "Principles of Highway Capacity Research" (105) by O. K. Normann

### HYDRAULICS

- "Characteristics of the Solitary Wave" (107) by James W. Dally and Samuel C. Stephan, Jr.
- Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- Dsc (D-28) of "Retrospection on the Lower Colorado River After 1935" (28)
- Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)
- "Experimental Investigation of Fire Monitors and Nozzles" (92) by Hunter Rouse, J. W. Howe, and D. E. Metzler
- "Experimental Study of Water Flow in Annular Pipes" (88) by W. M. Owen

- "Ground-Water Movement Controlled Through Spreading" (86) by Paul Baumann
- "Measurement of Sedimentation in Small Reservoirs" (55) by L. C. Gottschalk
- "Model and Prototype Studies of Sand Traps" (67) by Ralph L. Parshall
- "Model Tests Using Low-Velocity Air" (76) by James W. Bail
- "Regime Theory for Self-Formed Sediment-Bearing Channels" (70) by Thomas Blench
- "River Channel Roughness" (78) by Hans A. Einstein and Nicholas L. Barbarossa
- Rt "Review of Flood Frequency Methods: Final Report of the Subcommittee of the Joint Division Committee on Floods" (110) William P. Creager, Chmn
- "Surface Curves for Steady Nonuniform Flow" (96) by Robert B. Jansen
- "Turbulent Transfer Mechanics and Suspended Sediment in Closed Channels" (56) by Hassan M. Ismail

### HYDROLOGY

- "Consumptive Use in the Rio Grande Basin" (97) by Robert L. Lowry
- "Consumptive Use of Water by Forest and Range Vegetation" (90) by L. R. Rich
- Dsc (D-38) of "Hydrology of Mexico" (38)
- Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)
- "Stage Predictions for Flood Control Operations" (79) by Ralph E. King

### IRRIGATION

- "Analysis of Ground-Water Lowering Adjacent to Open Water" (106) by Stuart B. Avery
- "Consumptive Use in Municipal and Industrial Areas" (99) by George B. Gleason
- "Consumptive Use in the Rio Grande Basin" (97) by Robert L. Lowry
- "Consumptive Use of Water" (91) by Harry F. Blaney
- "Consumptive Use of Water by Forest and Range Vegetation" (90) by L. R. Rich
- "Consumptive Use of Water on Irrigated Land" (98) by Wayne D. Criddle
- "Design of Irrigation Systems" (57) by W. H. Nalder
- Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- Dsc (D-38) of "Hydrology of Mexico" (38)
- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)
- "Ground-Water Movement Controlled Through Spreading" (86) by Paul Baumann
- "Model and Prototype Studies of Sand Traps" (67) by Ralph L. Parshall
- "Regime Theory for Self-Formed Sediment-Bearing Channels" (70) by Thomas Blench
- "Research in Water Spreading" (111) by Dean C. Muckel
- Rt "Review of Flood Frequency Methods: Final Report of the Subcommittee of the Joint Division Committee on Floods" (110) William P. Creager, Chmn
- "Utilization of Ground Water in California" (102) by T. Russel Simpson

# SUBJECT INDEX

## LAKES

- "Waterway Traffic on the Great Lakes" (83) by John R. Hardin

## LEGAL TOPICS

- Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)
- "Planning the National Capital: Objectives and Problems of Attainment" (64) by Ulysses S. Grant, III
- "Valuation and Depreciation Related to Income Tax" (69) by Maurice R. Scharff

## MAPPING

- "International Cartography" (68) by Robert H. Randall
- "National Topographic Mapping" (66) by W. E. Wrather
- "Some Aspects of Electronic Surveying" (52) by Carl I. Aslakson
- "Surveying and Mapping Requirements for Modern City Planning" (60) by Charles A. Blessing

## MARYLAND

- "Friendship International Airport" (94) by Benjamin Everett Beavin, Sr.

## MECHANICS

- "Buckling Stresses for Flat Plates and Sections" (77) by Elbridge Z. Stowell, George J. Helmerl and Charles Libove
- "Deflections in Gridworks and Slabs" (89) by Walter W. Ewell, Shigeo Okubo, and Joel I. Abrams
- Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)
- Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (paper in Proceedings, Dec 1949)
- Dsc (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)
- Dsc (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)
- Dsc (D-49) of "Large Hyperbolic Functions Computed by Fission" (49)
- "Forced Vibrations of Continuous Beams" (100) by Edward Saibel and Elio D'Appolonia
- "Laterally Loaded Plane Structures and Structures Curved in Space" (51) by Frank Baron and James P. Michalos
- "Limit Design of Beams and Frames" (59) by H. J. Greenberg and W. Prager
- "Structural Damping in Suspension Bridges" (61) by Friedrich Bleich and L. W. Teller
- "Surface Curves for Steady Nonuniform Flow" (96) by Robert B. Jansen
- "Truss Deflections by the Coordinate Method" (54) by Kuang-Han Chu
- "Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (55) by Hassan M. Ismail

## MEXICO

- Dsc (D-38) of "Hydrology of Mexico" (38)
- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- "Rectification of the Papaloapan River in Mexico" (71) by Reynaldo Schega

## MODELS

- "Model and Prototype Studies of Sand Traps" (67) by Ralph L. Parshall
- "Model Tests Using Low-Velocity Air" (76) by James W. Ball

## NEW MEXICO

- Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)

## NEW YORK

- Dsc (D-43) of "Settlement Correction at La Guardia Field" (43)

## PAVEMENTS

- "Base Course Drainage for Airport Pavements" (75) by A. Casagrande and W. L. Shannon
- Dsc (D-16) of "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16)
- Dsc (D-23) of "Influence of Heavy Loads on Pavement Design Trends" (23)

## POWER

- "Design of Irrigation Systems" (57) by W. H. Nalder
- "Design of Large Coal Bunkers" (72) by Paul Rogers
- Dsc (D-17) of "Origin and Significance of Openwork Gravel" (17)
- Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- "Model and Prototype Studies of Sand Traps" (67) by Ralph L. Parshall
- "Petenwell Hydroelectric Project" (81) by E. Montford Fucik
- "Stage Predictions for Flood Control Operations" (79) by Ralph E. King
- "Valuation and Depreciation Related to Income Tax" (69) by Maurice R. Scharff

## RESERVOIRS

- Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)
- "Measurement of Sedimentation in Small Reservoirs" (55) by L. C. Gottschalk

## RIVERS

- "Consumptive Use in the Rio Grande Basin" (97) by Robert L. Lowry
- "Design of Irrigation Systems" (57) by W. H. Nalder
- Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- Dsc (D-28) of "Retrospection on the Lower Colorado River After 1935" (28)
- "Mississippi River Valley Geology: Relation to River Regime" (80) by Harold N. Fisk
- "Rectification of the Papaloapan River in Mexico" (71) by Reynaldo Schega
- "River Channel Roughness" (78) by Hans A. Einstein and Nicholas L. Barbarossa



## SUBJECT INDEX

### SANITARY ENGINEERING

- \*Acceptable Standards for Natural Waters Used for Bathing" (74) by Charles R. Cox
- \*Consumptive Use in Municipal and Industrial Areas" (99) by George B. Gleason
- Dsc (D-37) of "Design of Prestressed Tanks" (37)
- \*Health Implications of Air Pollution" (73) by J. J. Bloomfield
- \*Longitudinal Mixing Measured by Radioactive Tracers" (84) by Harold A. Thomas, Jr. and Ralph S. Archibald
- \*Resinous Ion Exchangers in Water Treatment" (85) by William W. Aultman
- Rt "Review of Flood Frequency Methods" (110)
- \*Sewage Reclamation by Spreading Basin Infiltration" (87) by Ralph Stone and William F. Garber

### SEDIMENTATION

- Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)
- \*Measurement of Sedimentation in Small Reservoirs" (55) by L. C. Gottschalk
- \*Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56) by Hassan M. Ismail

### SOIL MECHANICS

- \*Analysis of Ground Water Lowering Adjacent to Open Water" (106) by Stuart B. Avery
- \*Base Course Drainage for Airport Pavements" (75) by A. Casagrande and W. L. Shannon
- \*Control of Embankment Material by Laboratory Testing" (108) by F. C. Walker and W. G. Holtz
- Dsc (D-7) of "The Geochemistry of Earthworks" (7) by Hyde Forbes
- Dsc (D-16) of "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16)
- Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)
- Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- Dsc (D-43) of "Settlement Correction at La Guardia Field" (43)
- Dsc (D-44) of "The Problem of Wave Action on Earth Slopes" (44)
- \*Final Foundation Treatment at Hoover Dam" (109) by A. Warren Simonds
- \*Mississippi River Valley Geology: Relation to River Regime" (80) by Harold N. Fisk
- \*Pile Foundations for Large Towers on Permafrost" (103) by L. A. Nees

### STRUCTURAL ENGINEERING

- \*Buckling Stresses for Flat Plates and Sections" (77) by Elbridge Z. Stowell, George J. Heimerl, and Charles Libove
- \*Deflections in Gridworks and Slabs" (89) by Walter W. Ewell, Shigeo Okubo, and Joel I. Abrams
- \*Design of Large Coal Bunkers" (72) by Paul Rogers
- Dsc (D-8) of "Floating Tunnel for Long Water Crossings" (8)
- Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- Dsc (D-21) of "Maximum Load Capacity of Bailey Bridges" (21)

- Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)
- Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (paper in Proceedings, Dec 1949)
- Dsc (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)
- Dsc (D-32) of "Effect of Skew Angle on Rigid-Frame Reactions" (32)
- Dsc (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)
- Dsc (D-34) of "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34)
- Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- Dsc (D-42) of "Wind-Load Standards in Europe" (42)
- Dsc (D-49) of "Large Hyperbolic Functions Computed by Fission" (49)
- \*Lateral Forces of Earthquake and Wind" (66) by Arthur W. Anderson, John A. Blume, Henry J. Degenkolb, Harold B. Hammill, Edward M. Knapik, Henry L. Marchand, Henry C. Powers, John E. Rinne, George A. Sedgwick and Harold O. Sjoberg
- \*Laterally Loaded Plane Structures and Structures Curved in Space" (51) by Frank Baron and James P. Michalos
- \*Limit Design of Beams and Frames" (59) by H. J. Greenberg and W. Prager
- \*Pile Foundations for Large Towers on Permafrost" (103) by L. A. Nees
- \*Pressures in a Shallow Rectangular Bin" (82) by Raymond L. Moore and J. R. Shaw
- \*Structural Damping in Suspension Bridges" (61) by Friedrich Bleich and L. W. Teller
- \*Truss Deflections by the Coordinate Method" (54) by Kuang-Han Chu
- \*Wedge-Beam Framing" (53) by Arsham Amirikian

### SURVEYING

- \*International Cartography" (68) by Robert H. Randall
- \*Measurement of Sedimentation in Small Reservoirs" (55) by L. C. Gottschalk
- \*National Geodesy--Status and Planning" (63) by Leo Otis Colbert
- \*National Topographic Mapping" (65) by W. E. Wrather
- \*Some Aspects of Electronic Surveying" (52) by Carl I. Aslakson
- \*Surveying and Mapping Requirements for Modern City Planning" (60) by Charles A. Blessing

### TANKS

- Dsc (D-37) of "Design of Prestressed Tanks" (37)

### TENNESSEE

- Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)

### TRUSSES

- Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)
- \*Truss Deflections by the Coordinate Method" (54) by Kuang-Han Chu

# SUBJECT INDEX

## TUNNELS

Dsc (D-8) of "Floating Tunnel for Long Water Crossings" (8) by Charles E. Andrew

## TURKEY

"Highway Planning in Turkey" (58) by H. E. Hilts

## WATER SUPPLIES

"Acceptable Standards for Natural Waters Used for Bathing" (74) by Charles R. Cox

"Experimental Study of Water Flow in Annular Pipes" (88) by W. M. Owen

"Longitudinal Mixing Measured by Radioactive Tracers" (84) by Harold A. Thomas, Jr. and Ralph S. Archibald

"Research in Water Spreading" (111) by Dean C. Muckel

"Resinous Ion Exchangers in Water Treatment" (35) by William W. Aultman

## WATERWAYS

Dsc (D-28) of "Retrogression of the Lower Colorado River After 1935" (28)

Dsc (D-44) of "The Problem of Wave Action on Earth Slopes" (44)

"Mississippi River Valley Geology Relation to River Regime" (80) by Harold N. Fisk

"Rectification of the Papaloapan River in Mexico" (71) by Reynaldo Schega

"River Channel Roughness" (78) by Hans A.

Einstein and Nicholas L. Barbarossa

Rt "Review of Flood Frequency Methods" (110)

"Stage Predictions for Flood Control Operations" (79) by Ralph E. King

"Waterway Traffic on the Great Lakes" (83) by John R. Hardin

## WAVES

"Characteristics of the Solitary Wave" (107)

by James W. Daily and Samuel C. Stephan, Jr.

Dsc (D-44) on "The Problem of Wave Action on Earth Slopes" (44)

## WIND

Dsc (D-42) of "Wind-Load Standards in Europe" (42)

"Lateral Forces of Earthquake and Wind" (66)

by Arthur W. Anderson, John A. Blume, Henry J.

Degenkolb, Harold B. Hammill, Edward M.

Knapik, Henry L. Marchand, Henry C. Powers,

John E. Rinne, George A. Sedgwick and Harold

O. Sjoberg

## WISCONSIN

"Petenwell Hydroelectric Project" (81) by

E. Montford Fucik

# AUTHOR INDEX

## ABRAMS, DUFF A.

Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)

## ABRAMS, JOEL I.

See Ewell, Walter W. (89)

## ALOFF, ABRAHAM M.

Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)

## AMIRIKIAN, ARSHAM

"Wedge-Beam Framing" (53)

## ANDERSON, ARTHUR W.

"Lateral Forces of Earthquake and Wind" (66) with John A. Blume, Henry J. Degenkolb, Harold B. Hammill, Edward M. Knapik, Henry L. Marchand, Henry C. Powers, John E. Rinne, George A. Sedgwick, and Harold O. Sjoberg

## ANDREW, CHARLES E.

Dsc of 8: Robert S. Mayo, and Homer M. Hadley (D-8)

Clo (D-8) of "Floating Tunnel for Long Water Crossings" (8)

## APPOLONIA, ELIO D'

See D'Appolonia (100)

## ARCHIBALD, RALPH S.

See Thomas, Harold A., Jr. (84)

## ARNOLD, MILTON W.

"Aircraft Design as Related to Airport Standards" (93)

## ARUP, LEIF

Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)

## ASLAKSON, CARL I.

"Some Aspects of Electronic Surveying" (52)

## AULTMAN, WILLIAM W.

"Resinous Ion Exchangers in Water Treatment" (85)

## AVERY, STUART B.

"Analysis of Ground-Water Lowering Adjacent to Open Water" (106)

## BALL, JAMES W.

"Model Tests Using Low-Velocity Air" (76)

## BALLESTER, RUDOLFO E.

Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)

## BARBAROSSA, NICHOLAS L.

See Einstein, Hans A. (78)

## BARON, FRANK

"Laterally Loaded Plane Structures and Structures Curved in Space" (51) with James P. Michalos

## BARRON, MAURICE

Dsc of 13: D. A. Nettleton, Ernest H. Harder, Egidio O. DiGenova, Kuang-Han Chu, Harold E. Levenson, Walter L. Schwartz, Leo Sos, and Leif Arup (D-13)

Clo (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)

Dsc (D-32) of "Effect of Skew Angle on Rigid-Frame Reactions" (32)

Dsc (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)

## BAUMANN, PAUL

"Ground-Water Movement Controlled Through Spreading" (86)

## BEAVIN, BENJAMIN EVERETT, SR.

"Friendship International Airport" (94)

## BEER, E. E. DE-

See De Beer, E. E. (D-18)

## BENJAMIN, JACK R.

Dsc (D-34) of "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34)

## BERNHARD, R. K.

Dsc (D-61) of "Structural Damping in Suspension Bridges" (61)

## BLANEY, HARRY F.

"Consumptive Use of Water" (91)

## BLEICH, FRIEDRICH

"Structural Damping in Suspension Bridges" (61) with L. W. Teller

Dsc of 61: R. K. Bernhard, George S. Vincent, F. B. Farquharson, and Arne Selberg (D-61)

Clo (D-61) of "Structural Damping in Suspension Bridges" (61)

## BLENCH, THOMAS

"Regime Theory for Self-Formed Sediment-Bearing Channels" (70)

Dsc (D-28) of "Retgression on the Lower Colorado River After 1935" (28)

Dsc (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)

Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)

## BLESSING, CHARLES A.

"Surveying and Mapping Requirements for Modern City Planning" (60)

## BLOOMFIELD, J. J.

"Health Implications of Air Pollution" (73)

## BLUME, JOHN A.

See Anderson, Arthur W. (66)

## BOLEY, BRUNO A.

Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)

See Hoff, N. J. (D-24)

# AUTHOR INDEX

- BONDURANT, D. C.  
Dsc of 29: T. Blench (D-29)  
Clo (D-29) of "Sedimentation Studies at Conchas Reservoir in New Mexico" (29)
- BORG, ROBERT F.  
Dsc of 36: Samuel I. Sacks, Melvin W. Jackson, George J. Soffer and Abraham M. Aloff (D-36)  
Clo (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- BOYER, WALTER C.  
Dsc of 32: D. A. Nettleton, and Maurice Barron (D-32)  
Clo (D-32) of "Effect of Skew Angle on Rigid-Frame Reactions" (32)
- BRETSCHNEIDER, C. L.  
Dsc (D-44) with R. R. Putz, of "The Problem of Wave Action on Earth Slopes" (44)
- BUCKLEY, J. P.  
"Application of Highway Capacity Research" (101)
- BURKE, RALPH H.  
"Directional Requirements for Airport Runways" (95) with Harry Otis Wright, Jr.
- CAMBEFORT, H.  
Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)
- CARY, ALLEN S.  
Dsc of 17: Jacob Feld, A. Casagrande, A. Mayer, H. Cambefort, Hyde Forbes and L. F. Harza  
Clo (D-17) of "Origin and Significance of Open-work Gravel" (17)
- CASAGRANDE, A.  
"Base Course Drainage for Airport Pavements" (75) with W. L. Shannon  
Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)
- CASTLEMAN, FRANCIS L., JR.  
Dsc (D-42) with Aron L. Mirsky, of "Wind-Load Standards in Europe" (42)
- CHOW, VEN TE  
Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- CHU, KUANG-HAN  
"Truss Deflections by the Coordinate Method" (54)  
Dsc of 54: L. C. Maugh (D-54)  
Clo (D-54) of "Truss Deflections by the Coordinate Method" (54)  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- CLARK, J. W.  
See Hill, H. N. (D-34)
- COLBERT, LEO OTIS  
"National Geodesy--Status and Planning" (63)
- COOPER, K. L.  
Dsc (D-49) of "Large Hyperbolic Functions Computed by Fission" (49)
- COOTE, T. C.  
"The New Towns Program in Great Britain" (62)
- CORFITZEN, WILLIAM E.  
Dsc of 30: T. Blench and Martin Maeyers (D-30)  
Clo (D-30) of "Economic Effects of Reservoir Sedimentation" (30)
- COX, CHARLES R.  
"Acceptable Standards for Natural Waters Used for Bathing" (74)
- CREAGER, WILLIAM P.  
Rt "Review of Flood Frequency Methods": Final Report of the Subcommittee of the Joint Division Committee on Floods (110); William P. Creager, Chmn  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- CRIDDLE, WAYNE D.  
"Consumptive Use of Water on Irrigated Land" (98)
- CROM, J. M.  
Dsc of 37: L. J. Mensch and Herbert A. Sawyer, Jr. (D-37)  
Clo (D-37) of "Design of Prestressed Tanks" (37)
- DAILY, JAMES W.  
"Characteristics of the Solitary Wave" (107) with Samuel C. Stephan, Jr.
- D'APOLONIA, ELIO  
See Edward Saibel (11)
- DAVISON, A. H.  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- De BEER, E. E.  
Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- DEGENKOLB, HENRY J.  
See Anderson, Arthur W. (66)
- DI GENOVA, EGIDIO O.  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- DRUCKER, D. C.  
Dsc of 27: R. W. Steed, Jacob Karol and S. K. Ghaswala (D-27-D)  
Clo (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)
- du PLESSIS, J. V.  
See Plessis, J. V. du- (D-18)
- EINSTEIN, HANS A.  
"River Channel Roughness" (78) with Nicholas L. Barbarossa
- ERP, JOHN W. T. Van-  
See Van Erp, John W. T. (D-42)
- EWELL, WALTER W.  
"Deflections in Gridworks and Slabs" (89) with Shigeo Okubo and Joel I. Abrams

# AUTHOR INDEX

## FADUM, RALPH E.

Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)

## FARQUHARSON, F. B.

Dsc (D-61) of "Structural Damping in Suspension Bridges" (61)

## FELD, JACOB

Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)

## FIRMAGE, D. ALLAN

Dsc (D-21) of "Maximum Load Capacity of Bailey Bridges" (21)

## FIK, HAROLD N.

"Mississippi River Valley Geology: Relation To River Regime" (80)

## FLOOK, LYMAN R., JR.

Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)

## FORBES, HYDE

Dsc of 7: Warren D. Smith, D. P. Krynine, S. S. Gorman, Charles H. Lee and George S. Harman (D-7)

Clo (D-7) of "The Geochemistry of Earthwork" (7)

Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)

## FUCK, E. MONTFORD

"Petenwell Hydroelectric Project" (81)

## GARBER, WILLIAM F.

See Stone, Ralph (87)

## GARCIA-QUINTERO, ANDRÉS

Dsc of 38: Andrew Weiss, Milton O. Schmidt and Gerard H. Matthes (D-38)

## GENOVA, EGIDIO O. Di-

See Di Genova, Egidio O.

## GHASWALA, S. K.

Dsc (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)

Dsc (D-42) of "Wind-Load Standards in Europe" (42)

## GLEASON, GEORGE B.

"Consumptive Use in Municipal and Industrial Areas" (99)

## GOLDER, HUGH Q.

Dsc (D-16) of "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16)

## GOLZE, ALFRED R.

Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)

## GORMAN, S. S.

Dsc (D-7) of "The Geochemistry of Earthwork" (7)

## GOTTSCHALK, L. C.

"Measurement of Sedimentation in Small Reservoirs" (55)

## GRANT, ULYSSES S., III

"Planning the National Capital: Objectives and Problems of Attainment" (64)

## GREENBERG, H. J.

"Limit Design of Beams and Frames" (59) with W. Prager

## HADLEY, HOMER M.

Dsc (D-8) of "Floating Tunnel for Long Water Crossings" (8)

## HAMMILL, HAROLD B.

See Anderson, Arthur W. (66)

## HANSON, W. E.

Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)

## HARDER, ERNEST H.

Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)

## HARDIN, JOHN R.

"Waterway Traffic on the Great Lakes" (83)

## HARMAN, GEORGE S.

Dsc (D-7) of "The Geochemistry of Earthwork" (7)

## HARZA, L. F.

Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)

## HAYDEN, ARTHUR

Dsc (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)

## HEIMERL, GEORGE J.

See Stowell, Elbridge Z. (77)

## HERRMANN, GEORGE

Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)

## HILL, H. N.

Dsc of 34: Jack R. Benjamin and Jacob Karol (D-34)

Clo (D-34) of "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34)

## HILL, RAYMOND A.

Dsc of 47: George W. Howard, Lyman R. Flook, Jr., Rudolfo E. Ballester and Alfred R. Golze (D-47)

Clo (D-47) of "Operation and Maintenance of Irrigation Systems" (47)

## HILTS, H. E.

"Highway Planning in Turkey" (58)

## HOFF, N. J.

Dsc of 24: Jacob Karol, Alfred S. Niles, Thomas C. Kavanagh, George Winter and Oliver G. Julian (D-24)

## HOLTZ, W. G.

See Walker, F. C. (108)

# AUTHOR INDEX

- HOWARD, GEORGE W.  
Dsc (D-47) of "Operation and Maintenance of Irrigation Systems" (47)
- HOWE, J. W.  
See Rouse, Hunter (92)
- HOWELL, CLEVES H.  
Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- HOWELL, HERBERT H.  
"Redesign of Major Airport Terminals" (104)
- HUDSON, ROBERT Y., SR.  
Dsc (D-44) of "The Problem of Wave Action on Earth Slopes" (44)
- HURST, H. E.  
Dsc of 11: Ven Te Chow, Henri Milleret and Louis M. Laushey (D-11)  
Clo (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- ISMAIL, HASSAN M.  
"Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56)
- JACKSON, MELVIN W.  
Dsc (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)  
Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- JANSEN, ROBERT B.  
"Surface Curves for Steady Non-Uniform Flow" (96)
- JEWELL, HENRY H.  
Dsc (D-44) of "The Problem of Wave Action on Earth Slopes" (44)
- JULIAN, OLIVER G.  
See Winter, George (D-24)
- KAROL, JACOB  
Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)  
Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)  
Dsc (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)  
Dsc (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)  
Dsc (D-34) of "Lateral Buckling of Eccentrically Loaded I-Section Columns" (34)
- KAUFMAN, SARA  
See Hoff, N. J. (D-24)
- KAVANAGH, THOMAS C.  
Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)
- KEENER, KENNETH B.  
Dsc of 25: Ross M. Riegel, William P. Creager, A. Warren Simonds, Fairfax D. Kirn, Serge Lelivsky, A. H. Davison and Duff A. Abrams (D-25-K)
- Clo (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- KING, RALPH E.  
"Stage Predictions for Flood Control Operations" (79)
- KIRN, FAIRFAX D.  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- KNAPIK, EDWARD M.  
See Anderson, Arthur W. (66)
- KRSMANOVITCH, D.  
Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- KRYNINE, D. P.  
Dsc (D-7) of "The Geochemistry of Earthwork" (7)  
Dsc (D-43) of "Settlement Correction at La Guardia Field" (43)
- KYLE, JOHN M.  
Dsc of 43: D. P. Krynine (D-43)  
Clo (D-43) of "Settlement Correction at La Guardia Field" (43)
- LANE, E. W.  
Dsc (D-28) of "Retrogression on the Lower Colorado River After 1935" (28)
- LAUSHEY, LOUIS M.  
Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- LEE, CHARLES H.  
Dsc (D-7) of "The Geochemistry of Earthwork" (7)
- LELIAVSKY, SERGE  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- LEVENSON, HAROLD E.  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- LIBOVE, CHARLES  
See Stowell, Elbridge Z. (77)
- LINSLEY, RAY K., JR.  
Dsc (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- LLEWELLYN, F. T.  
Dsc of 49: John Sherman and K. L. Cooper (D-49)  
Clo (D-49) of "Large Hyperbolic Functions Computed by Fission" (49)
- LOWRY, ROBERT L.  
"Consumptive Use in the Rio Grande Basin" (97)
- MAEVERS, MARTIN  
Dsc (D-30) of "Economic Effects of Reservoir Sedimentation" (30)

# AUTHOR INDEX

- MARCHAND, HENRY L.  
See Anderson, Arthur W. (66)
- MASON, MARTIN A.  
Dsc of 44: Robert Y. Hudson, Sr., Fred C. Walker, Henry H. Jewell, C. L. Bretschneider and R. R. Putz (D-44)  
Clo (D-44) of "The Problem of Wave Action on Earth Slopes" (44)
- MATTHES, GERARD H.  
Dsc (D-38) of "Hydrology of Mexico" (38)  
Dsc (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)
- MAUGH, L. C.  
Dsc (D-54) of "Truss Deflections by the Coordinate Method" (54)
- MAYER, A.  
Dsc (D-17) of "Origin and Significance of Open-work Gravel" (17)
- MAYO, ROBERT S.  
Dsc (D-8) of "Floating Tunnel for Long Water Crossings" (8)
- MENSCH, L. J.  
Dsc (D-37) of "Design of Prestressed Tanks" (37)
- METZLER, D. E.  
See Rouse, Hunter (92)
- MICHALOS, JAMES P.  
See Baron, Frank (51)
- MILLERET, HENRI  
Dsc (D-11) of "Long-Term Storage Capacity of Reservoirs" (11)
- MIRSKY, ARON L.  
See Castleman, Francis L., Jr. (D-42)
- MOORE, RAYMOND L.  
"Pressures in a Shallow Rectangular Bin" (82) with J. R. Shaw
- MUCKEL, DEAN C.  
"Research in Water Spreading" (111)
- NALDER, W. H.  
"Design of Irrigation Systems" (57)
- NARDO, S. V.  
See Hoff, N. J. (D-24)
- NEES, L. A.  
"Pile Foundations for Large Towers on Permafrost" (103)
- NETTLETON, D. A.  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)  
Dsc (D-32) of "Effect of Skew Angle on Rigid-Frame Reactions" (32)
- NILES, ALFRED S.  
Dsc (D-24) of "Buckling of Rigid-Jointed Plane Trusses" (24)
- NORMANN, O. K.  
"Principles of Highway Capacity Research" (105)
- OKUBO, SHIGEO  
See Ewell, Walter W. (89)
- OWEN, W. M.  
"Experimental Study of Water Flow in Annular Pipes" (88)
- PARSHALL, RALPH L.  
"Model and Prototype Studies of Sand Traps" (67)
- PLESSIS, J. V. du-  
Dsc (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- POLLARD, WILLIAM S., JR.  
Dsc (D-23) of "Influence of Heavy Loads on Pavement Design Trends" (23)
- POPOV, E. P.  
Dsc of 18: Ralph E. Fadum, J. V. du Plessis, W. E. Hanson, Jacob Karol, E. E. De Beer and D. Krsmanovitch (D-18)  
Clo (D-18) of "Successive Approximations for Beams on an Elastic Foundation" (18)
- POWERS, HENRY C.  
See Anderson, Arthur W. (66)
- PRAGER, W.  
See Greenberg, H. J. (59)
- PUTZ, R. R.  
See Bretschneider, C. L. (D-44)
- QUINTERO, ANDRÉS GARCIA-  
See Garcia-Quintero, Andrés (D-38)
- RAMASWAMY, G. S.  
Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)
- RANDALL, ROBERT H.  
"International Cartography" (68)
- RICH, L. R.  
"Consumptive Use of Water by Forest and Range Vegetation" (90)
- RIEGEL, ROSS M.  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- RIGHTS, THEODORE B.  
Dsc (D-42) of "Wind-Load Standards in Europe" (42)
- RINNE, JOHN E.  
See Anderson, Arthur W. (66)
- ROGERS, PAUL  
"Design of Large Coal Bunkers" (72)  
Dsc (D-42) of "Wind-Load Standards in Europe" (42)



# AUTHOR INDEX

- ROUSE, HUNTER  
"Experimental Investigation of Fire Monitors and Nozzles" (92) with J. W. Howe and D. E. Metzler
- RUCKLI, ROBERT  
Dsc (D-16) of "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16)
- RUTTER, EDWARD J.  
Dsc of 19: Ray K. Linsley, Jr. (D-19)  
Clo (D-19) of "Flood-Control Operation of Tennessee Valley Authority Reservoirs" (19)
- SACKS, SAMUEL I.  
Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- SAFFIR, HERBERT S.  
Dsc (D-42) of "Wind-Load Standards in Europe" (42)
- SAIBEL, EDWARD  
"Forced Vibrations of Continuous Beams" (11) with Elio D'Appolonia
- SALVADORI, MARIO G.  
Dsc of paper in Proceedings, Dec 1949: I. K. Silverman, Bruno A. Boley, G. S. Ramaswamy, Chi-Teh Wang, and George Herrmann (D-XXV)  
Clo (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)
- SAWYER, HERBERT A., JR.  
Dsc (D-37) of "Design of Prestressed Tanks" (37)
- SCHARFF, MAURICE R.  
"Valuation and Depreciation Related to Income Tax" (69)
- SCHEGA, REYNALDO  
"Rectification of the Papaloapan River in Mexico" (71)
- SCHMIDT, MILTON O.  
Dsc (D-38) of "Hydrology of Mexico" (38)
- SCHWARTZ, WALTER L.  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- SEDGWICK, GEORGE A.  
See Anderson, Arthur W. (66)
- SELBERG, ARNE  
Dsc (D-61) of "Structural Damping in Suspension Bridges" (61)
- SHANNON, W. L.  
See Casagrande, A. (75)
- SHAW, J. R.  
See Moore, Raymond L. (82)
- SHERMAN, JOHN  
Dsc (D-49) of "Large Hyperbolic Functions Computed by Fission" (49)
- SILVERMAN, I. K.  
Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)
- SIMONDS, A. WARREN  
"Final Foundation Treatment at Hoover Dam" (109)  
Dsc (D-25-K) of "Uplift Pressures in Concrete Dams" (25)
- SIMPSON, T. RUSSEL  
"Utilization of Ground Water in California" (102)
- SJOBERG, HAROLD O.  
See Anderson, Arthur W. (66)
- SMITH, WARREN D.  
Dsc (D-7) of "The Geochemistry of Earthwork" (7)
- SOFFER, GEORGE J.  
Dsc (D-36) of "Impossibility of Performance in Contracts for Engineering and Construction" (36)
- SOUROCHNIKOFF, BASIL  
Dsc of 33: Jacob Karol and Melvin W. Jackson (D-33)  
Clo (D-33) of "Strength of I-Beams in Combined Bending and Torsion" (33)
- SOS, LEO  
Dsc (D-13) of "Reinforced Concrete Skewed Rigid-Frame and Arch Bridges" (13)
- STANLEY, J. W.  
Clo (D-28) of "Retrospection on the Lower Colorado River After 1935" (28)  
Dsc of 28: T. Blench and E. W. Lane (D-28)
- STEED, R. W.  
Dsc (D-27-D) of "Plasticity of Metals--Mathematical Theory and Structural Applications" (27)
- STEGMAIER, ROBERT B., JR.  
Dsc of 21: D. Allan Firmage (D-21)  
Clo (D-21) of "Maximum Load Capacity of Bailey Bridges" (21)
- STEPHAN, SAMUEL C., JR.  
See Daily, James W. (107)
- STOWELL, ELBRIDGE Z.  
"Buckling Stresses for Flat Plates and Sections" (77) with George J. Heimerl and Charles Libove
- STONE, RALPH  
"Sewage Reclamation by Spreading Basin Infiltration" (87) with William F. Garber
- TELLER, L. W.  
See Bleich, Friedrich (61)  
See Bleich, Friedrich (D-61)
- THOMAS, HAROLD A., JR.  
"Longitudinal Mixing Measured by Radioactive Tracers" (84) with Ralph S. Archibald

# AUTHOR INDEX

## VAN ERP, JOHN W. T.

Dsc of 42: Paul Rogers, Carl H. Walther, Francis L. Castleman, Jr., Aron L. Mirsky, S. K. Ghaswala, Herbert S. Saffir and Theodore B. Rights (D-42)

Clo (D-42) of "Wind-Load Standards in Europe" (42)

## VINCENT, GEORGE S.

Dsc (D-61) of "Structural Damping in Suspension Bridges" (61)

## WALKER, FRED C.

"Control of Embankment Material by Laboratory Testing" (108) with W. G. Holtz

Dsc (D-44) of "The Problem of Wave Action on Earth Slopes" (44)

## WALTHER, CARL H.

Dsc (D-42) of "Wind-Load Standards in Europe" (42)

## WANG, CHI-TEH

Dsc (D-XXV) of "Numerical Computation of Buckling Loads by Finite Differences" (Proceedings, Dec 1949)

## WEINER, BERNARD L.

Dsc of 39: Maurice Barron and Arthur Hayden (39)

Clo (D-39) of "Practical Design of Solid-Barrel, Reinforced-Concrete Skew Structures" (39)

## WEISS, ANDREW

Dsc of 40: Cleves H. Howell and Gerard H. Matthes (D-40)

Clo (D-40) of "Construction Technique of Passing Floods Over Earth Dams" (40)

Dsc (D-38) of "Hydrology of Mexico" (38)

## WILLIAMS, G. M. J.

See Wilson, Guthlac (16)

See Wilson, Guthlac (D-16)

## WILSON, GUTHLAC

Dsc of 16: Robert Ruckli and Hugh Q. Golder (D-16)

Clo (D-16) of "Pavement Bearing Capacity Computed by Theory of Layered Systems" (16)

## WINTER, GEORGE

Dsc (D-24), with Oliver G. Julian, of "Buckling of Rigid-Jointed Plane Trusses" (24)

## WOODS, K. B.

Dsc of 23: William S. Pollard, Jr. (D-23)

Clo (D-23) of "Influence of Heavy Loads on Pavement Design Trends" (23)

## WRATHER, W. E.

"National Topographic Mapping" (65)

## WRIGHT, HARRY OTIS, JR.

See Burke, Ralph H. (95)

The first of these is the fact that the  
 government has been unable to raise  
 sufficient funds to meet its obligations.  
 This has been due to a variety of factors,  
 including the fact that the government  
 has been unable to collect its taxes  
 and the fact that it has been forced  
 to borrow money from foreign  
 countries.

The second factor is the fact that the  
 government has been unable to control  
 its expenditures. This has been due  
 to the fact that the government has  
 been forced to spend money on  
 military and other expenses, which  
 has led to a large deficit.

The third factor is the fact that the  
 government has been unable to control  
 its inflation. This has been due to  
 the fact that the government has  
 been forced to print money, which  
 has led to a large increase in the  
 money supply.

The fourth factor is the fact that the  
 government has been unable to control  
 its foreign debt. This has been due  
 to the fact that the government has  
 been forced to borrow money from  
 foreign countries, which has led to a  
 large increase in its foreign debt.

The fifth factor is the fact that the  
 government has been unable to control  
 its interest rates. This has been due  
 to the fact that the government has  
 been forced to raise its interest rates,  
 which has led to a large increase in  
 the cost of borrowing.

The sixth factor is the fact that the  
 government has been unable to control  
 its exchange rate. This has been due  
 to the fact that the government has  
 been forced to devalue its currency,  
 which has led to a large increase in  
 the cost of imports.

The seventh factor is the fact that the  
 government has been unable to control  
 its balance of payments. This has been  
 due to the fact that the government  
 has been forced to run a large trade  
 deficit, which has led to a large  
 increase in its foreign debt.

The eighth factor is the fact that the  
 government has been unable to control  
 its fiscal policy. This has been due  
 to the fact that the government has  
 been forced to increase its spending,  
 which has led to a large increase in  
 its foreign debt.

---

# AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded November 5, 1852

---

## ANNUAL INDEX

---

Subject and Author Indexes  
for

PROCEEDINGS

Volume 78 (1952)

Items indexed are identified by months, as follows:

| Month     | Number   |
|-----------|--|
| January   | Proceedings-Separates 112 to 114, D-51, D-57, D-60, and D-62.  |
| February  | 115 to 118, D-56, D-59, and D-70.  |
| March     | 119 to 122, D-65, and D-71.  |
| April     | 123 to 126, D-53, and D-72.  |
| May       | 127 to 132, D-66, D-79, and D-80.  |
| June      | 133 to 136, D-75, D-76, and D-84.  |
| July      | 137 to 141, D-78, D-86, D-87, D-92, D-96, and D-100.   |
| August    | 142 to 147.  |
| September | 148 to 153.  |
| October   | 154 to 156, and D-109.   |
| November  | 157, 158, D-106, D-113, and D-115.   |
| December  | 159 to 163, D-69, D-77, D-89, D-90, D-91, D-93, D-97, D-98, D-99, D-101, D-102, D-103, D-105, and D-112. |

---

### SUBJECT INDEX

#### AIR TRANSPORT

Dsc (D-93) of "Aircraft Design as Related to Airport Standards" (93) See Arnold, Milton W.

Rt "A Comparison of Design Methods for Airfield Pavements: Progress Report of the Committee on Correlation of Runway Design Procedures of the Air Transport Division" (163) Walter Johannessen, Chmn

#### ALUMINUM

Rt "Specifications for Structures of a Moderate Strength Aluminum Alloy of High Resistance to Corrosion: Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (132) E. C. Hartmann, Chmn

#### BEAMS

"Flexure of Double Cantilever Beams" (158) by F. E. Wolosewick

"Horizontally Curved Box Beams" (128) by Charles E. Cutts

"Stresses in Deep Beams" (127) by Li Chow, Harry D. Conway, and George Winter

"Torsion of I-Type and H-Type Beams" (145) by John E. Goldberg

"Torsion of Plate Girders" (125) by F. K. Chang and Bruce G. Johnston

#### BRIDGES

"Construction of the Delaware Memorial Bridge" (137) by Homer R. Seely

"East St. Louis Veterans Memorial Bridge" (150) by A. L. R. Sanders

Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridges" (144A, 144B) E. F. Kelley, Chmn

"The Delaware Memorial Bridge: Design Problems" (147) by Charles H. Clarahan, Jr. and Elmer K. Timby

#### CALIFORNIA

"Field Study of a Sheet-Pile Bulkhead" (155) by C. Martin Duke

"Utilization of Underground Storage Reservoirs" (114) by Harvey O. Banks

"The Development of Stresses in Shasta Dam" (117) by J. M. Raphael

#### CANADA

"Ice Pressure Against Dams: Some Investigations in Canada" (161) by A. D. Hogg

#### CITY PLANNING

Dsc (D-62) of "The New Towns Program in Great Britain" (62) See Coote, Thomas C.

"The Allegheny Conference--Planning in Action" (131) by Park H. Martin

"The Value and Administration of a Zoning Plan" (138) by Huber Earl Smutz

#### CONSTRUCTION

"Construction of the Delaware Memorial Bridge" (137) by Homer R. Seely

"East St. Louis Veterans Memorial Bridge" (150) by A. L. R. Sanders

# SUBJECT INDEX

## CONSTRUCTION

- "The Delaware Memorial Bridge: Design Problems" (147) by Charles H. Clarahan, Jr. and Elmer K. Timby

## CORROSION

- Rt "Specifications for Structures of a Moderate Strength Aluminum Alloy of High Resistance to Corrosion: Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (132) E. C. Hartmann, Chmn
- "Underground Corrosion of Piping" (130) by R. A. Brannon

## DAMS

- "Analysis of Arch Dams of Variable Thickness" (129) by W. A. Perkins
- "Ice Pressure Against Dams: Experimental Investigations by the Bureau of Reclamation" (162) by G. E. Monfore
- "Ice Pressure Against Dams: Some Investigations in Canada" (161) by A. D. Hogg
- "Ice Pressure Against Dams: Studies of the Effects of Temperature Variations" (160) by Bertil Lofquist
- Rt "Uplift in Masonry Dams: Final Report of the Subcommittee on Uplift in Masonry Dams of the Committee on Masonry Dams, 1951" (133) Ross M. Riegel, Chmn
- "The Development of Stresses in Shasta Dam" (117) by J. M. Raphael

## DELAWARE

- "Construction of the Delaware Memorial Bridge" (137) by Homer R. Seely
- "The Delaware Memorial Bridge: Design Problems" (147) by Charles H. Clarahan, Jr. and Elmer K. Timby

## DRAINAGE

- Dsc (D-90) of "Consumptive Use of Water by Forest and Range Vegetation" (90) See Rich, L. R.
- Dsc (D-91) of "Consumptive Use of Water" (91) See Blaney, Harry F.
- Dsc (D-97) of "Consumptive Use in the Rio Grande Basin" (97) See Lowry, Robert L.
- Dsc (D-98) of "Consumptive Use of Water on Irrigated Land" (98) See Criddle, Wayne D.
- Dsc (D-99) of "Consumptive Use in Municipal and Industrial Areas" (99) See Gleason, George B.
- Dsc (D-102) of "Utilization of Ground Water in California" (102) See Simpson, T. Russel
- "Rice Irrigation in Louisiana" (156) by E. E. Shotts

## ELECTRONICS

- "Application of Electronic Flow Routing Analog" (135) by Max A. Kohler
- "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146) by Henry M. Paynter
- "Solution of an Hydraulic Problem by Analog Computer" (134) by R. E. Glover, D. J. Hebert, and C. R. Daum

## EROSION

- "Lake Michigan Erosion Studies" (115) by John R. Hardin and William H. Booth, Jr.

## FLOODS

- "Development of a Flood-Control Plan for

Houston, Texas" (159) by Ellsworth I. Davis

## FOUNDATIONS

- "Bank Stabilization by Revetments and Dikes" (148) by Raymond H. Haas and Harvill E. Weller
- Dsc (D-75) of "Base Course Drainage for Airport Pavements" (75) See Casagrande, A.
- Dsc (D-108) of "Control of Embankment Material by Laboratory Testing" (108) See Walker, F. C.
- Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109) See Simonds, A. Warren
- "Field Study of a Sheet-Pile Bulkhead" (155) by C. Martin Duke
- "Underground Corrosion of Piping" (130) by R. A. Brannon
- Rt "Uplift in Masonry Dams: Final Report of the Subcommittee on Uplift in Masonry Dams of the Committee on Masonry Dams, 1951" (133) Ross M. Riegel, Chmn

## FRAMES

- "Steady-State Forced Vibration of Continuous Frames" (136) by C. T. G. Looney

## HIGHWAYS

- Dsc (D-101) of "Application of Highway Capacity Research" (101) See Buckley, J. P.
- Dsc (D-105) of "Principles of Highway Capacity Research" (105) See Normann, O. K.
- "Methods for Making Highway Soil Surveys" (152) by K. B. Woods
- "Rate of Change of Grade Per Station" (121) by Clarence J. Brownell

## HYDRAULICS

- "Application of Electronic Flow Routing Analog" (135) by Max A. Kohler
- "Characteristics of Fixed-Dispersion Cone Valves" (153) by Rex A. Elder and Gale B. Dougherty
- Dsc (D-56) of "Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56) See Ismail, Hassan M.
- Dsc (D-76) of "Model Tests Using Low-Velocity Air" (76) See Ball, James W.
- Dsc (D-78) of "River Channel Roughness" (78) See Einstein, Hans A.
- Dsc (D-92) of "Experimental Investigation of Fire Monitors and Nozzles" (92) See Rouse, Hunter
- Dsc (D-96) of "Surface Curves for Steady Non-uniform Flow" (96) See Jansen, Robert B.
- "Divisions from Alluvial Streams" (112) by C. P. Lindner
- "Effect of Entrance Conditions on Diffuser Flow" (141) by J. M. Robertson and Donald Ross
- "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146) by Henry M. Paynter
- "Engineering Aspects of Diffraction and Refraction" (122) by J. W. Johnson
- "Graphical Solution of Hydraulic Problems" (116) by Kenneth E. Sorensen
- "Hydrodynamic Problems in Three Dimensions" (143) by P. G. Hubbard and S. C. Ling
- "Long-Period Waves or Surges in Harbors" (123) by John H. Carr
- "Nonlinear Electrical Analogy for Pipe Networks" (139) by Malcolm S. McIlroy

## SUBJECT INDEX

### HYDRAULICS

- "Solution of an Hydraulic Problem by Analog Computer" (134) by R. E. Glover, D. J. Hebert, and C. R. Daum
- "Surface Water Wave Theories" (120) by Martin A. Mason
- "Wave Forces on Breakwaters" (113) by Robert Y. Hudson

### ILLINOIS

- "East St. Louis Veterans Memorial Bridge" (150) by A. L. R. Sanders
- "Lake Michigan Erosion Studies" (115) by John R. Hardin and William H. Booth, Jr.

### IOWA

- "Industrial Waste Treatment in Iowa" (149) by Paul Bolton

### IRRIGATION

- Dsc (D-57) of "Design of Irrigation Systems" (57) See Nalder, W. H.
- Dsc (D-70) of "Regime Theory for Self-Formed Sediment-Bearing Channels" (70) See Blench, Thomas
- Dsc (D-86) of "Ground-Water Movement Controlled Through Spreading" (86) See Baumann, Paul
- Dsc (D-90) of "Consumptive Use of Water by Forest and Range Vegetation" (90) See Rich, L. R.
- Dsc (D-91) of "Consumptive Use of Water" (91) See Blaney, Harry F.
- Dsc (D-97) of "Consumptive Use in the Rio Grande Basin" (97) See Lowry, Robert L.
- Dsc (D-98) of "Consumptive Use of Water on Irrigated Land" (98) See Criddle, Wayne D.
- Dsc (D-99) of "Consumptive Use in Municipal and Industrial Areas" (99) See Gleason, George B.
- Dsc (D-102) of "Utilization of Ground Water in California" (102) See Simpson, T. Russel
- "Irrigation Water Rights in the Humid Areas" (140) by Howard T. Critchlow
- "Rice Irrigation in Louisiana" (156) by E. E. Shutts
- "Unconfined Ground-Water Flow to Multiple Wells" (142) by Vaughn E. Hansen
- "Utilization of Underground Storage Reservoirs" (114) by Harvey O. Banks

### KENTUCKY

- "Topographic Mapping in Kentucky" (151) by Phil M. Miles

### LAKES

- "Lake Michigan Erosion Studies" (115) by John R. Hardin and William H. Booth, Jr.

### LEGAL TOPICS

- "Irrigation Water Rights in the Humid Areas" (140) by Howard T. Critchlow
- "The Allegheny Conference--Planning in Action" (131) by Park H. Martin
- "The Value and Administration of a Zoning Plan" (138) by Huber Earl Smutz

### LOUISIANA

- "Rice Irrigation in Louisiana" (156) by E. E. Shutts

### MAPPING

- Dsc (D-60) of "Surveying and Mapping Require-

- ments for Modern City Planning" (60) See Blessing, Charles A.
- Dsc (D-65) of "National Topographic Mapping" (65) See Wrather, W. E.
- "Methods for Making Highway Soil Surveys" (152) by K. B. Woods
- "Topographic Mapping in Kentucky" (151) by Phil M. Miles

### MECHANICS

- "Analysis of Arch Dams of Variable Thickness" (129) by W. A. Perkins
- Dsc (D-100) of "Forced Vibrations of Continuous Beams" (100) See Saibel, Edward
- "Effect of Entrance Conditions on Diffuser Flow" (141) by J. M. Robertson and Donald Ross
- "Flexure of Double Cantilever Beams" (158) by F. E. Wolosewick
- "Graphical Solution of Hydraulic Problems" (116) by Kenneth E. Sorensen
- "Horizontally Curved Box Beams" (128) by Charles E. Cutts
- "Hydrodynamic Problems in Three Dimensions" (143) by P. G. Hubbard, and S. C. Ling
- "Influence Lines by Corrections to an Assumed Shape" (124) by James P. Michalos and Edward N. Wilson
- "Nonlinear Electrical Analogy for Pipe Networks" (139) by Malcolm S. McIlroy
- "Radial Impact on an Elastically Supported Ring" (157) by Edward Wenk, Jr.
- Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridges" (144A, 144B) E. F. Kelley, Chmn
- "Steady-State Forced Vibration of Continuous Frames" (136) by C. T. G. Looney
- "Stresses in Deep Beams" (127) by Li Chow, Harry D. Conway, and George Winter
- "Thin-Walled Members in Combined Torsion and Flexure" (119) by Warner Lansing
- "Torsion of I-Type and H-Type Beams" (145) by John E. Goldberg

### PAVEMENTS

- Rt "A Comparison of Design Methods for Air-field Pavements: Progress Report of the Committee on Correlation of Runway Design Procedures of the Air Transport Division" (163) Walter Johannessen, Chmn

### PENNSYLVANIA

- "The Allegheny Conference--Planning in Action" (131) by Park H. Martin

### POWER

- "Analysis of Arch Dams of Variable Thickness" (129) by W. A. Perkins
- Dsc (D-69) of "Valuation and Depreciation Related to Income Tax" (69) See Scharff, Maurice R.
- "Ice Pressure Against Dams: Experimental Investigations by the Bureau of Reclamation" (162) by G. E. Monfore
- "Ice Pressure Against Dams: Some Investigations in Canada" (161) by A. D. Hogg
- "Ice Pressure Against Dams: Studies of the Effects of Temperature Variations" (160) by Bertil Lofquist
- Rt "Uplift in Masonry Dams: Final Report of the Subcommittee on Uplift in Masonry Dams of the Committee on Masonry Dams, 1951" (133) Ross M. Riegei, Chmn

# SUBJECT INDEX

## REPORTS

Rt "A Comparison of Design Methods for Air-field Pavements: Progress Report of the Committee on Correlation of Runway Design Procedures of the Air Transport Division" (163) Walter Johannessen, Chmn

Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridges" (144A, 144B) E. F. Kelley, Chmn

Rt "Specifications for Structures of a Moderate Strength Aluminum Alloy of High Resistance to Corrosion: Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (132) E. C. Hartmann, Chmn

Rt "Uplift in Masonry Dams: Final Report of the Subcommittee on Uplift in Masonry Dams of the Committee on Masonry Dams, 1951" (133) Ross M. Riegel, Chmn

## RESERVOIRS

"Utilization of Underground Storage Reservoirs" (114) by Harvey O. Banks

## RIVERS

"Bank Stabilization by Revetments and Dikes" (148) by Raymond H. Haas and Harvill E. Weller

"Diversion from Alluvial Streams" (112) by C. P. Lindner

## SANITARY ENGINEERING

Dsc (D-84) of "Longitudinal Mixing Measured by Radioactive Tracers" (84) See Thomas, Harold A., Jr.

Dsc (D-87) of "Sewage Reclamation by Spreading Basin Infiltration Spreading" (87) See Stone, Ralph

"Flocculation Phenomena in Turbid Water Clarification" (118) by W. F. Langeller, Harvey F. Ludwig, and Russell G. Ludwig

"Industrial Waste Treatment in Iowa" (149) by Paul Bolton

"Underground Corrosion of Piping" (130) by R. A. Brannon

## SOIL MECHANICS

"Bank Stabilization by Revetments and Dikes" (148) by Raymond H. Haas and Harvill E. Weller

Dsc (D-75) of "Base Course Drainage for Airport Pavements" (75) See Casagrande, A.

Dsc (D-108) of "Control of Embankment Material by Laboratory Testing" (108) See Walker, F. C.

Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109) See Simonds, A. Warren

"Field Study of a Sheet-Pile Bulkhead" (155) by C. Martin Duke

"Methods for Making Highway Soil Surveys" (152) by K. B. Woods

"Underground Corrosion of Piping" (130) by R. A. Brannon

## STRUCTURAL ENGINEERING

"Construction of the Delaware Memorial Bridge" (137) by Homer R. Seely

Dsc (D-51) of "Laterally Loaded Plane Structures and Structures Curved in Space" (51) See Baron, Frank

Dsc (D-53) of "Wedge-Beam Framing" (53) See Amirikian, Arsham

Dsc (D-59) of "Limit Design of Beams and Frames" (59) See Greenberg, H. J.

Dsc (D-63) of "Lateral Forces of Earthquake

and Wind" (66) See Anderson, Arthur W.

Dsc (D-72) of "Design of Large Coal Bunkers" (72) See Rogers, Paul

Dsc (D-77) of "Buckling Stresses for Flat Plates and Sections" (77) See Stowell, Elbridge Z.

Dsc (D-89) of "Deflections in Gridworks and Slabs" (89) See Ewell, Walter W.

Dsc (D-103) of "Pile Foundations for Large Towers on Permafrost" (103) See Nees, L. A.

"East St. Louis Veterans Memorial Bridge" (150) by A. L. R. Sanders

"Flexure of Double Cantilever Beams" (158) by F. E. Wolosewick

"Horizontally Curved Box Beams" (128) by Charles E. Cutts

"Influence Lines by Corrections to an Assumed Shape" (124) by James P. Michalos and Edward N. Wilson

Rt "A Comparison of Design Methods for Air-field Pavements: Progress Report of the Committee on Correlation of Runway Design Procedures of the Air Transport Division" (163) Walter Johannessen, Chmn

Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridges" (144A, 144B) E. F. Kelley, Chmn

Rt "Specifications for Structures of a Moderate Strength Aluminum Alloy of High Resistance to Corrosion: Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (132) E. C. Hartmann, Chmn

"Steady-State Forced Vibration of Continuous Frames" (136) by C. T. G. Looney

"Stresses in Deep Beams" (127) by Li Chow, Harry D. Conway, and George Winter

"The Delaware Memorial Bridge: Design Problems" (147) by Charles H. Claraham, Jr. and Elmer K. Timby

"The Development of Stresses in Shasta Dam" (117) by J. M. Raphael

"Thin-Walled Members in Combined Torsion and Flexure" (119) by Warner Lansing

"Torsion of I-Type and H-Type Beams" (145) by John E. Goldberg

"Torsion of Plate Girders" (125) by F. K. Chang and Bruce G. Johnston

"Variation of Wind Velocity and Gusts with Height" (126) by R. H. Sherlock

## SURVEYING

Dsc (D-60) of "Surveying and Mapping Requirements for Modern City Planning" (60) See Blessing, Charles A.

Dsc (D-65) of "National Topographic Mapping" (65) See Wrather, W. E.

"Methods for Making Highway Soil Surveys" (152) by K. B. Woods

"Rate of Change of Grade Per Station" (121) by Clarence J. Brownell

"Topographic Mapping in Kentucky" (151) by Phil M. Miles

## SWEDEN

"Ice Pressure Against Dams: Studies of the Effects of Temperature Variations" (160) by Bertil Lofquist

## TEXAS

"A Navigation Channel to Victoria, Texas" (154) by Albert B. Davis, Jr.



# SUBJECT INDEX

## TEXAS

"Development of a Flood-Control Plan for Houston, Texas" (159) by Ellsworth I. Davis

## VALVES

"Characteristics of Fixed-Dispersion Cone Valves" (153) by Rex A. Elder and Gale B. Dougherty

## WASHINGTON

Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridge" (144A, 144B) E. F. Kelley, Chmn

## WATER SUPPLIES

"Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146) by Henry M. Paynter  
 "Flocculation Phenomena in Turbid Water Clarification" (118) by W. F. Langelier, Harvey F. Ludwig, and Russell G. Ludwig  
 "Unconfined Ground-Water Flow to Multiple Wells" (142) by Vaughn E. Hansen

## WATERWAYS

"A Navigation Channel to Victoria, Texas" (154) by Albert B. Davis, Jr.

"Bank Stabilization by Revetments and Dikes" (148) by Raymond H. Haas and Harvill E. Weller  
 "Development of a Flood-Control Plan for Houston, Texas" (159) by Ellsworth I. Davis  
 Dsc (D-71) of "Rectification of the Papaloapan River in Mexico" (71) See Schega, Reynaldo  
 Dsc (D-79) of "Stage Predictions for Flood Control Operations" (79) See King, Ralph E.  
 Dsc (D-80) of "Mississippi River Valley Geology Relation to River Regime" (80) See Fisk, Harold N.  
 "Diversions from Alluvial Streams" (112) by C. P. Lindner  
 "Engineering Aspects of Diffraction and Refraction" (122) by J. W. Johnson  
 "Field Study of a Sheet-Pile Bulkhead" (155) by C. Martin Duke  
 "Lake Michigan Erosion Studies" (115) by John R. Hardin and William H. Booth, Jr.  
 "Long-Period Waves or Surges in Harbors" (123) by John H. Carr  
 "Surface Water Wave Theories" (120) by Martin A. Mason  
 "Wave Forces on Breakwaters" (113) by Robert Y. Hudson

## WIND

"Variation of Wind Velocity and Gusts with Height" (126) by R. H. Sherlock

# AUTHOR INDEX

- ABRAMS, JOEL L.**  
See Ewell, Walter W. (D-89)
- ALFORD, J. L.**  
See Martel, R. R. (D-66)
- AMIRIKIAN, ARSHAM**  
Dsc of 53: G. C. Ernst, J. J. Hromadik, and G. R. Swihart; Herbert A. Sawyer, Jr.; J. J. Polivka (D-53)  
Clo (D-53) of "Wedge-Beam Framing" (53)
- ANDERSON, ARTHUR W.**  
Dsc of 66: Seismic Research Group, Architectural Institute of Japan; Reuben W. Binder; R. R. Martel; G. W. Housner, and J. L. Alford; S. K. Guha and Gurdas Ram (D-66)  
Clo (D-66) with John A. Blume, Henry J. Degenkolb, Harold B. Hammill, Edward M. Knapik, Henry L. Marchand, Henry C. Powers, John E. Rinne, George A. Sedgwick, and Harold O. Sjoberg of "Lateral Forces of Earthquake and Wind" (66)
- APPEL, DAVID W.**  
Dsc (D-76) of "Model Tests Using Low-Velocity Air" (76)
- ARCHIBALD, RALPH S.**  
See Thomas, Harold A., Jr. (D-84)
- ARNOLD, JOHN H.**  
Dsc (D-92) of "Experimental Investigation of Fire Monitors and Nozzles" (92)
- ARNOLD, MILTON W.**  
Dsc of 93: John H. Geisse (D-93)
- BAATARD, FRANCOIS**  
See Oguey, Pierre (D-92)
- BABBITT, H. E.**  
See Bishay, Maurice (D-96)
- BAJORUNAS, L.**  
Dsc (D-78) of "River Channel Roughness" (78)
- BALL, JAMES W.**  
Dsc of 76: David W. Appel (D-76)  
Clo (D-76) of "Model Tests Using Low-Velocity Air" (76)
- BANKS, HARVEY O.**  
"Utilization of Underground Storage Reservoirs" (114)
- BANKS, ROBERT B.**  
Dsc (D-78) of "River Channel Roughness" (78)
- BARBAROSSA, NICHOLAS**  
See Einstein, Hans A. (D-78)
- BARBER, EDWARD S.**  
Dsc (D-75) of "Base Course Drainage for Airport Pavements" (75)
- BARNETT, JOSEPH**  
Dsc (D-101) of "Application of Highway Capacity Research" (101)
- BARON, FRANK**  
Dsc of 51: Uku Müllersdorf and Maurice Barron (D-51)  
Clo (D-51) with James P. Michalos of "Laterally Loaded Plane Structures and Structures Curved in Space" (51)
- BARRON, MAURICE**  
Dsc (D-51) of "Laterally Loaded Plane Structures and Structures Curved in Space" (51)
- BAUMANN, PAUL**  
Dsc of 86: David K. Todd, Max Suter, and D. P. Krynlne (D-86)  
Clo (D-86) of "Ground-Water Movement Controlled Through Spreading" (86)
- BENJAMIN, JACK R.**  
Dsc (D-59) of "Limit Design of Beams and Frames" (59)  
Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)
- BERRY, DONALD S.**  
Dsc (D-101) of "Application of Highway Capacity Research" (101)
- BIJLAARD, P. P.**  
Dsc (D-77) of "Buckling Stresses for Flat Plates and Sections" (77)
- BINDER, REUBEN W.**  
Dsc (D-66) of "Lateral Forces of Earthquake and Wind" (66)
- BISHAY, MAURICE**  
Dsc (D-96) with H. E. Babbitt of "Surface Curves for Steady Nonuniform Flow" (96)
- BLANCHARD, GEORGE L.**  
Dsc (D-72) of "Design of Large Coal Bunkers" (72)
- BLANEY, HARRY F.**  
Dsc of 91: George H. Hargreaves and William W. Donnan (D-91)  
Clo (D-91) of "Consumptive Use of Water" (91)
- BLENCH, T.**  
Dsc of 70: Emmett M. Laursen and Gerard H. Matthes (D-70)  
Clo (D-70) of "Regime Theory for Self-Formed Sediment-Bearing Channels" (70)  
Dsc (D-78) of "River Channel Roughness" (78)  
Dsc (D-112) of "Diversion from Alluvial Streams" (112)
- BLESSING, CHARLES A.**  
Dsc of 60: Harold M. Lewis and Leon T. Elieel (D-60)  
Clo (D-60) of "Surveying and Mapping Requirements for Modern City Planning" (60)
- BLUME, JOHN A.**  
See Anderson, Arthur W. (D-66)
- BOGGESE, O. E.**  
Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109)

# AUTHOR INDEX

- BOLTON, PAUL**  
"Industrial Waste Treatment in Iowa" (149)
- BONDURANT, D. C.**  
Dsc (D-112) of "Diversion from Alluvial Streams" (112)
- BOOTH, WILLIAM H., JR.**  
See Hardin, John R. (115)  
See Hardin, John R. (D-115)
- BORN, ROBERT H.**  
Dsc (D-99) of "Consumptive Use in Municipal and Industrial Areas" (99)
- BOWERMAN, F. R.**  
See Rawn, A M (D-87)
- BRANNON, R. A.**  
"Underground Corrosion of Piping" (130)
- BRENNAN, PAUL J.**  
Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)
- BROWNELL, CLARENCE J.**  
"Rate of Change of Grade per Station" (121)
- BUCKLEY, J. P.**  
Dsc of 101: Donald S. Berry, Joseph Barnett, and O. K. Normann (D-101)  
Clo (D-101) of "Application of Highway Capacity Research" (101)
- BUEHLER, ROBERT**  
Dsc (D-79) with W. S. Hoehl of "Stage Predictions for Flood Control Operations" (79)
- CAMBEFORT, H.**  
Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109)
- CARLSON, HARRY**  
Dsc (D-103) of "Pile Foundations for Large Towers on Permafrost" (103)
- CARR, JOHN H.**  
"Long-Period Waves or Surges in Harbors" (123)
- CARSTENS, M. R.**  
Dsc (D-56) of "Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56)
- CASAGRANDE, A.**  
Dsc of 75: Edward S. Barber and D. P. Kryniene (D-75)  
Clo (D-75) with W. L. Shannon of "Base Course Drainage for Airport Pavements" (75)
- CASEY, THOMAS B.**  
Dsc (D-115) of "Lake Michigan Erosion Studies" (115)
- CHANG, F. K.**  
"Torsion of Plate Girders" (125) with Bruce G. Johnston
- CHOW, LI**  
"Stresses in Deep Beams" (127) with Harry D. Conway and George Winter
- CHOW, VEN TE**  
See Doland, James J. (D-78)
- CLARAHAN, CHARLES H., JR.**  
"The Delaware Memorial Bridge: Design Problems" (147) with Elmer K. Timby
- CONWAY, HARRY D.**  
See Chow, Li (127)
- COOTE, THOMAS C.**  
Dsc of 62: W. Strickler (D-62)  
Clo (D-62) of "The New Towns Program in Great Britain" (62)
- CRIDDLE, WAYNE D.**  
Dsc of 98: Clyde E. Houston (D-98)  
Clo (D-98) of "Consumptive Use of Water on Irrigated Land" (98)
- CRITCHLOW, HOWARD T.**  
"Irrigation Water Rights in the Humid Areas" (140)
- CUTTS, CHARLES E.**  
"Horizontally Curved Box Beams" (128)
- D'APPOLONIA, ELIO**  
See Saibel, Edward (D-100)
- DAUM, C. R.**  
See Glover, R. E. (134)
- DAVIS, ALBERT B., JR.**  
"A Navigation Channel to Victoria, Texas" (154)
- DAVIS, ELLSWORTH L.**  
"Development of a Flood-Control Plan for Houston, Texas" (159)
- DEGENKOLB, HENRY J.**  
See Anderson, Arthur W. (D-66)
- DOLAND, JAMES J.**  
Dsc (D-78) with Ven Te Chow of "River Channel Roughness" (78)
- DONNAN, WILLIAM W.**  
Dsc (D-91) of "Consumptive Use of Water" (91)
- DOUGHERTY, GALE B.**  
See Elder, Rex A. (153)
- DUKE, C. MARTIN**  
"Field Study of a Sheet-Pile Bulkhead" (155)
- EINSTEIN, HANS A.**  
Dsc of 78: T. Blench; James J. Doland and Ven Te Chow; Robert B. Banks; L. Bajorunas; and Sir Claude Inglis (D-78)
- ELDER, REX A.**  
"Characteristics of Fixed-Dispersion Cone Valves" (153) with Gale B. Dougherty
- ELIEL, LEON T.**  
Dsc (D-60) of "Surveying and Mapping Requirements for Modern City Planning" (60)

# AUTHOR INDEX

- ERNST, G. C.  
Dsc (D-53) with J. J. Hromadik and G. R. Swihart of "Wedge-Beam Framing" (53)
- EWELL, WALTER W.  
Dsc of 89: Jack R. Benjamin, Alexander C. Scordellis, Paul J. Brennan, Serge Leliavsky Bey, W. Watters Pagon, Phil M. Ferguson and Robert V. Whitman (D-89)  
Clo (D-89) with Shigeo Okubo and Joel I. Abrams of "Deflections in Gridworks and Slabs" (89)
- FERGUSON, PHIL M.  
Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)
- FIELDHAMMER, E. L.  
Dsc (D-105) of "Principles of Highway Capacity Research" (105)
- FIISK, HAROLD N.  
Dsc of 80: Leo M. Odom and Stafford C. Happ (D-80)  
Clo (D-80) of "Mississippi River Valley Geology Relation to River Regime" (80)
- FRANCIOSI, VINCENZO  
Dsc (D-59) of "Limit Design of Beams and Frames" (59)
- GARBER, WILLIAM F.  
See Stone, Ralph (D-87)
- GEISSE, JOHN H.  
Dsc (D-93) of "Aircraft Design as Related to Airport Standards" (93)
- GLEASON, GEORGE B.  
Dsc of 99: Robert H. Born and Meyer Kramsky (D-99)
- GLOVER, R. E.  
"Solution of an Hydraulic Problem by Analog Computer" (134) with D. J. Hebert and C. R. Daum
- GLYNN, D. F.  
Dsc (D-108) of "Control of Embankment Material by Laboratory Testing" (108)
- GOLDBERG, JOHN E.  
"Torsion of I-Type and H-Type Beams" (145)
- GRANT, EUGENE L.  
Dsc (D-69) of "Valuation and Depreciation Related to Income Tax" (69)
- GREENBERG, H. J.  
Dsc of 59: L. E. Grinter, I. K. Silverman, Jack R. Benjamin, E. P. Popov, A. Hrennikoff, P. S. Symonds, H. Tachau, and Vincenzo Franciosi (D-59)  
Clo (D-59) with W. Prager of "Limit Design of Beams and Frames" (59)
- GRINTER, L. E.  
Dsc (D-59) of "Limit Design of Beams and Frames" (59)
- GUHA, S. K.  
Dsc (D-66) with Gurdas Ram of "Lateral Forces of Earthquake and Wind" (66)
- HAAS, RAYMOND H.  
"Bank Stabilization by Revetments and Dikes" (148) with Harvill E. Weller
- HALBRONN, G.  
Dsc (D-92) of "Experimental Investigation of Fire Monitors and Nozzles" (92)
- HALE, ISOM H.  
Dsc (D-97) with George A. Whetstone of "Consumptive Use in the Rio Grande Basin" (97)
- HAMMILL, HAROLD B.  
See Anderson, Arthur W. (D-66)
- HANSEN, VAUGHN E.  
"Unconfined Ground-Water Flow to Multiple Wells" (142)
- HAPP, STAFFORD C.  
Dsc (D-80) of "Mississippi River Valley Geology Relation to River Regime" (80)
- HARDIN, JOHN R.  
"Lake Michigan Erosion Studies" (115) with William H. Booth, Jr.  
Dsc of 115: Thomas B. Casey and Charles E. Lee (D-115)  
Clo (D-115) with William H. Booth, Jr. of "Lake Michigan Erosion Studies" (115)
- HARGREAVES, GEORGE H.  
Dsc (D-91) of "Consumptive Use of Water" (91)
- HARTMANN, E. C.  
Rt "Specifications for Structures of a Moderate Strength Aluminum Alloy of High Resistance to Corrosion: Progress Report of the Committee of the Structural Division on Design in Lightweight Structural Alloys" (132)
- HAYS, JAMES B.  
Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109)
- HEBERT, D. J.  
See Glover, R. E. (134)
- HEIMERL, GEORGE J.  
See Stowell, Elbridge Z. (D-77)
- HENNES, R. G.  
Dsc (D-113) with C. E. Leonoff of "Wave Forces on Breakwaters" (113)
- HOEHL, W. S.  
See Buehler, Robert (D-79)
- HOGG, A. D.  
"Ice Pressure Against Dams: Some Investigations in Canada" (161)
- HOLTZ, W. G.  
See Walker, F. C. (D-108)
- HOPPMANN, W. H.  
Dsc (D-100) of "Forced Vibrations of Continuous Beams" (100)
- HOUSNER, G. W.  
See Martel, R. R. (D-66)

# AUTHOR INDEX

## HOUSTON, CLYDE E.

Dsc (D-98) of "Consumptive Use of Water on Irrigated Land" (98)

## HOWE, J. W.

See Rouse, Hunter (D-92)

## HRENNIKOFF, A.

Dsc (D-59) of "Limit Design of Beams and Frames" (59)

## HROMADIK, J. J.

See Ernst, G. C. (D-53)

## HUBBARD, P. G.

"Hydrodynamic Problems in Three Dimensions" (143) with S. C. Ling

## HUDSON, ROBERT Y.

"Wave Forces on Breakwaters" (113)  
Dsc of 113: Kenneth Kaplan; and R. G. Hennes and C. E. Leonoff (D-113)  
Clo (D-113) of "Wave Forces on Breakwaters" (113)

## INGERSOLL, ALFRED C.

Dsc (D-84) of "Longitudinal Mixing Measured by Radioactive Tracers" (84)

## INGLES, SIR CLAUDE

Dsc (D-78) of "River Channel Roughness" (78)

## ISMAIL, HASSAN M.

Dsc of 56: Emmett M. Laursen and Pin-Nam Lin; and M. R. Carstens (D-56)  
Clo (D-56) of "Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56)

## JANSEN, ROBERT B.

Dsc of 96: Ivan M. Nelidov; J. C. Stevens; Maurice Bishay and H. E. Babbitt; K. C. Wu; and J. Pietrkowski (D-96)  
Clo (D-96) of "Surface Curves for Steady Non-uniform Flow" (96)

## JAPAN, ARCHITECTURAL INSTITUTE OF - SEISMIC RESEARCH GROUP

Dsc (D-66) of "Lateral Forces of Earthquake and Wind" (66)

## JOHANNESSEN, WALTER

Rt "A Comparison of Design Methods for Air-field Pavements: Progress Report of the Committee on Correlation of Runway Design Procedures of the Air Transport Division" (163)

## JOHNSON, J. W.

"Engineering Aspects of Diffraction and Refraction" (122)

## JOHNSTON, BRUCE G.

See Chang, F. K. (125)

## KAPLAN, KENNETH

Dsc (D-113) of "Wave Forces on Breakwaters" (113)

## KELLEY, E. F.

Rt "Aerodynamic Stability of Suspension Bridges: Progress Report of the Advisory Board on the Investigation of Suspension Bridges" (144A, 144B)

## KING, RALPH E.

Dsc of 79: Robert Buehler and W. S. Hoehl (D-79)  
Clo (D-79) of "Stage Predictions for Flood Control Operations" (79)

## KNAPIK, EDWARD M.

See Anderson, Arthur W. (D-66)

## KOHLER, MAX A.

"Application of Electronic Flow Routing Analog" (135)

## KRAMSKY, MEYER

Dsc (D-99) of "Consumptive Use in Municipal and Industrial Areas" (99)

## KRONE, R. B.

Dsc (D-87) with J. F. Thomas and Harvey F. Ludwig of "Sewage Reclamation by Spreading Basin Infiltration Spreading" (87)

## KRYNINE, D. P.

Dsc (D-65) of "National Topographic Mapping" (65)  
Dsc (D-75) of "Base Course Drainage for Airport Pavements" (75)  
Dsc (D-86) of "Ground-Water Movement Controlled Through Spreading" (86)  
Dsc (D-108) of "Control of Embankment Material by Laboratory Testing" (108)

## LANGELIER, W. F.

"Flocculation Phenomena in Turbid Water Clarification" (118) with Harvey F. Ludwig and Russell G. Ludwig

## LANSING, WARNER

"Thin-Walled Members in Combined Torsion and Flexure" (119)

## LAURSEN, EMMETT M.

Dsc (D-56) with Pin-Nam Lin of Turbulent Transfer Mechanism and Suspended Sediment in Closed Channels" (56)  
Dsc (D-70) of "Regime Theory for Self-Formed Sediment-Bearing Channels" (70)

## LEE, CHARLES E.

Dsc (D-115) of "Lake Michigan Erosion Studies" (115)

## LELIAVSKY, SERGE

Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)  
Dsc (D-112) of "Diversion from Alluvial Streams" (112)

## LEONOFF, C. E.

See Hennes, R. G. (D-113)

## LEWIS, HAROLD M.

Dsc (D-60) of "Surveying and Mapping Requirements for Modern City Planning" (60)

## LIBOVE, CHARLES

See Stowell, Elbridge Z. (D-77)

## LIN, PIN-NAM

See Laursen, Emmett, M. (D-56)

# AUTHOR INDEX

- LINDNER, C. P.  
"Diversions from Alluvial Streams" (112)  
Dsc of 112: T. Blench, Serge Lellavsky Bey,  
A. R. Thomas, and D. C. Bonchurant (D-112)  
Clo (D-112) of "Diversions from Alluvial  
Streams" (112)
- LING, S. C.  
See Hubbard, P. G. (143)
- LIPPOLD, FRED H.  
Dsc (D-109) of "Final Foundation Treatment at  
Hoover Dam" (109)
- LÖFQUIST, BERTIL  
"Ice Pressure Against Dams: Studies of the  
Effects of Temperature Variations" (160)
- LOONEY, C. T. G.  
"Steady-State Forced Vibration of Continuous  
Frames" (136)
- LOWRY, ROBERT L.  
Dsc of 97: Isom H. Hale and George A. Whet-  
stone, and H. R. McDonald (D-97)  
Clo (D-97) of "Consumptive Use in the Rio  
Grande Basin" (97)
- LUDWIG, HARVEY F.  
See Krone, R. B. (D-87)  
See Langelier, W. F. (118)
- LUDWIG, RUSSELL G.  
See Langelier, W. F. (118)
- LUNDQUIST, EUGENE E.  
See Stowell, Elbridge Z. (D-77)
- MAMIN, MARCEL  
See Oguey, Pierre (D-92)
- MARCHAND, HENRY L.  
See Anderson, Arthur W. (D-66)
- MARTEL, R. R.  
Dsc (D-66) with G. W. Housner and J. L. Alford  
of "Lateral Forces of Earthquake and Wind" (66)
- MARTIN, PARK H.  
"The Allegheny Conference--Planning in Action"  
(131)
- MASON, MARTIN A.  
"Surface Water Wave Theories" (120)
- MATTHES, GERARD H.  
Dsc (D-70) of "Regime Theory for Self-Formed  
Sediment-Bearing Channels" (70)
- McALPINE, WILLIAM H.  
Dsc (D-109) of "Final Foundation Treatment at  
Hoover Dam" (109)
- MCDONALD, H. R.  
Dsc (D-97) of "Consumptive Use in the Rio  
Grande Basin" (97)
- McILROY, MALCOLM S.  
"Nonlinear Electrical Analogy for Pipe Net-  
works" (139)
- METZLER, D. E.  
See Rouse, Hunter (D-92)
- MICHALOS, JAMES P.  
"Influence Lines by Corrections to an Assumed  
Shape" (124) with Edward N. Wilson  
See Baron, Frank (D-51)
- MILES, PHIL M.  
"Topographic Mapping in Kentucky" (151)
- MINEAR, V. L.  
Dsc (D-109) of "Final Foundation Treatment at  
Hoover Dam" (109)
- MONFORE, G. E.  
"Ice Pressure Against Dams: Experimental In-  
vestigations by the Bureau of Reclamation" (162)
- MUCKEL, DEAN C.  
Dsc (D-102) of "Utilization of Ground Water in  
California" (102)
- MÜLLERSDORF, UKU  
Dsc (D-51) of "Laterally Loaded Plane Struc-  
tures and Structures Curved in Space" (51)
- NALDER, W. H.  
Dsc of 57: Ahmed Shukry (D-57)  
Clo (D-57) of "Design of Ir-igation Systems" (57)
- NEES, L. A.  
Dsc of 103: Harry Carlson (D-103)  
Clo (D-103) of "Pile Foundations for Large  
Towers on Permafrost" (103)
- NELIDOV, IVAN M.  
Dsc (D-96) of "Surface Curves for Steady Non-  
uniform Flow" (96)
- NORMANN, O. K.  
Dsc of 105: E. L. Fieldhammer (D-105)  
Clo (D-105) of "Principles of Highway Capacity  
Research" (105)  
Dsc (D-101) of "Application of Highway Capac-  
ity Research" (101)
- ODOM, LEO M.  
Dsc (D-71) of "Rectification of the Papaloapan  
River in Mexico" (71)  
Dsc (D-80) of "Mississippi River Valley Geology  
Relation to River Regime" (80)
- OGUEY, PIERRE  
Dsc (D-92) with Marcel Mamin and François  
Baatar of "Experimental Investigation of Fire  
Monitors and Nozzles" (92)
- OKUBO, SHIGEO  
See Ewell, Walter W. (D-89)
- PAGON, W. WATTERS  
Dsc (D-89) of "Deflections in Gridworks and  
Slabs" (89)
- PAYNTER, HENRY M.  
"Electrical Analogies and Electronic Comput-  
ers: Surge and Water Hammer Problems" (146)

# AUTHOR INDEX

PECSOK, DONALD A.

See Straub, Conrad P. (D-84)

PERKINS, W. A.

"Analysis of Arch Dams of Variable Thickness"  
(129)

PIETRKOWSKI, J.

Dsc (D-96) of "Surface Curves for Steady Non-uniform Flow" (96)

POLIVKA, J. J.

Dsc (D-53) of "Wedge-Beam Framing" (53)

POPOV, E. P.

Dsc (D-59) of "Limit Design of Beams and Frames" (59)

POWERS, HENRY C.

See Anderson, Arthur W. (D-66)

PRAGER, W.

See Greenberg, H. J. (D-59)

RAM, GURDAS

See Guha, S. K. (D-66)

RAPHAEL, J. M.

"The Development of Stresses in Shasta Dam"  
(117)

RAWN, A M

Dsc (D-87) with F. R. Bowerman of "Sewage Reclamation by Spreading Basin Infiltration Spreading" (87)

RICH, L. R.

Dsc of 90: M. J. Youhotsky (D-90)  
Clo (D-90) of "Consumptive Use of Water by Forest and Range Vegetation" (90)

RIEGEL, ROSS M.

Rt "Uplift in Masonry Dams: Final Report of the Subcommittee on Uplift in Masonry Dams of the Committee on Masonry Dams, 1951" (133)

RINNE, JOHN E.

See Anderson, Arthur W. (D-66)

ROBERTSON, J. M.

"Effect of Entrance Conditions on Diffuser Flow"  
(141) with Donald Ross

ROGERS, PAUL

Dsc of 72: George L. Blanchard and Alexander M. Turitzin (D-72)  
Clo (D-72) of "Design of Large Coal Bunkers" (72)

ROSS, DONALD

See Robertson, J. M. (141)

ROUSE, HUNTER

Dsc of 92: G. Halbronn; Pierre Oguey, Marcel Mamin, and François Baatard; and John H. Arnold (D-92)  
Clo (D-92) with J. W. Howe and D. E. Metzler of "Experimental Investigation of Fire Monitors and Nozzles" (92)

SAIBEL, EDWARD

Dsc of 100: W. H. Hoppmann (D-100)  
Clo (D-100) with Ello D'Appolonia of "Forced Vibrations of Continuous Beams" (100)

SANDERS, A. L. R.

"East St. Louis Veterans Memorial Bridge" (150)

SAWYER, HERBERT A., JR.

Dsc (D-53) of "Wedge-Beam Framing" (53)

SCHARFF, MAURICE R.

Dsc of 69: George J. Soffer and Eugene L. Grant (D-69)  
Clo (D-69) of "Valuation and Depreciation Related to Income Tax" (69)

SCHEGA, REYNALDO

Dsc of 71: Leo M. Odom and Samuel Shulits (D-71)  
Clo (D-71) of "Rectification of the Papaloapan River in Mexico" (71)

SCHMIDT, MILTON O.

Dsc (D-65) of "National Topographic Mapping" (65)

SCORDELIS, ALEXANDER C.

Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)

SEDGWICK, GEORGE A.

See Anderson, Arthur W. (D-66)

SEELY, HOMER R.

"Construction of the Delaware Memorial Bridge"  
(137)

SHANNON, W. L.

See Casagrande, A. (D-75)

SHERLOCK, R. H.

"Variation of Wind Velocity and Gusts with Height" (126)

SHUKRY, AHMED

Dsc (D-57) of "Design of Irrigation Systems" (57)

SHULITS, SAMUEL

Dsc (D-71) of "Rectification of the Papaloapan River in Mexico" (71)

SHUTTS, E. E.

"Rice Irrigation in Louisiana" (156)

SILVERMAN, I. K.

Dsc (D-59) of "Limit Design of Beams and Frames" (59)

SIMONDS, A. WARREN

Dsc of 109: James B. Hays, V. L. Minear, Byram W. Steele, William H. McAlpine, Fred H. Lippold, O. E. Boggess, and H. Cambefort (D-109)  
Clo (D-109) of "Final Foundation Treatment at Hoover Dam" (109)

SIMPSON, T. RUSSEL

Dsc of 102: Dean C. Muckel (D-102)



# AUTHOR INDEX

- SIMPSON, T. RUSSEL  
Clo (D-102) of "Utilization of Ground Water in California" (102)
- SJOBORG, HAROLD O.  
See Anderson, Arthur W. (D-66)
- SMUTZ, HUBER EARL  
"The Value and Administration of a Zoning Plan" (138)
- SOFFER, GEORGE J.  
Dsc (D-69) of "Valuation and Depreciation Related to Income Tax" (69)
- SORENSEN, KENNETH E.  
"Graphical Solution of Hydraulic Problems" (116)
- SOWERS, GEORGE F.  
Dsc (D-108) of "Control of Embankment Material by Laboratory Testing" (108)
- STEELE, BYRAM W.  
Dsc (D-109) of "Final Foundation Treatment at Hoover Dam" (109)
- STEVENS, J. C.  
Dsc (D-96) of "Surface Curves for Steady Non-uniform Flow" (96)
- STONE, RALPH  
Dsc of 87: R. B. Krone, J. F. Thomas, and Harvey F. Ludwig; and A M Rawn and F. R. Bowerman (D-87)  
Clo (D-87) with William F. Garber of "Sewage Reclamation by Spreading Basin Infiltration Spreading" (87)
- STOWELL, ELBRIDGE Z.  
Dsc of 77: P. P. Bijlaard (D-77)  
Clo (D-77) with George J. Heimerl, Charles Libove, and Eugene E. Lundquist of "Buckling Stresses for Flat Plates and Sections" (77)
- STRAUB, CONRAD P.  
Dsc (D-84) with Donald A. Pecsok of "Longitudinal Mixing Measured by Radioactive Tracers" (84)
- STRICKLER, W.  
Dsc (D-62) of "The New Towns Program in Great Britain" (62)
- SUTER, MAX  
Dsc (D-86) of "Ground Water Movement Controlled Through Spreading" (86)
- SWIHART, G. R.  
See Ernst, G. C. (D-53)
- SYMONDS, P. S.  
Dsc (D-59) of "Limit Design of Beams and Frames" (59)
- TACHAU, H.  
Dsc (D-59) of "Limit Design of Beams and Frames" (59)
- THOMAS, A. R.  
Dsc (D-112) of "Diversion from Alluvial Streams" (112)
- THOMAS, HAROLD A., JR.  
Dsc of 84: Conrad P. Straub and Donald A. Pecsok, and Alfred C. Ingersoll (D-84)  
Clo (D-84) with Ralph S. Archibald of "Longitudinal Mixing Measured by Radioactive Tracers" (84)
- THOMAS, J. F.  
See Krone, R. B. (D-87)
- TIMBY, ELMER K.  
See Clarahan, Charles H., Jr. (147)
- TODD, DAVID K.  
Dsc (D-86) of "Ground-Water Movement Controlled Through Spreading" (86)
- TURITZIN, ALEXANDER M.  
Dsc (D-72) of "Design of Large Coal Bunkers" (72)
- WALKER, F. C.  
Clo (D-108) of "Control of Embankment Material by Laboratory Testing" (108)
- WELLER, HARVILL E.  
See Haas, Raymond H. (148)
- WENK, EDWARD, JR.  
"Radial Impact on an Elastically Supported Ring" (157)
- WHETSTONE, GEORGE A.  
See Hale, Isom H. (D-97)
- WHITMAN, ROBERT V.  
Dsc (D-89) of "Deflections in Gridworks and Slabs" (89)
- WILSON, EDWARD N.  
See Michalos, James P. (124)
- WINTER, GEORGE  
See Chow, Li (127)
- WOLOSEWICK, F. E.  
"Flexure of Double Cantilever Beams" (158)
- WOODS, K. B.  
"Methods for Making Highway Soil Surveys" (152)
- WRATHER, W. E.  
Dsc of 65: Milton O. Schmidt and D. P. Kry-nine (D-65)  
Clo (D-65) of "National Topographic Mapping" (65)
- WU, K. C.  
Dsc (D-96) of "Surface Curves for Steady Non-uniform Flow" (96)
- YOUHOTSKY, M. J.  
Dsc (D-90) of "Consumptive Use of Water by Forest and Range Vegetation" (90)

---

---

# AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded November 5, 1852

---

---

## ANNUAL INDEX

---

---

### Subject and Author Indexes

for

### PROCEEDINGS

Volume 79 (1953)

Items indexed are identified by months, as follows:

#### Month

January  
February  
March  
April  
May  
June  
July  
August  
September  
October  
November  
December

#### Number

Proceedings-Separates 164 to 168, D-117, D-122, and D-125.  
169 to 175, D-121, and D-127.  
176 to 180, D-123, D-126, and D-128.  
181 to 188, D-135, and D-136.  
189 to 193, D-129, D-136, and D-145.  
194 to 199, D-134, and D-141.  
200 to 229.  
230 to 259.  
260 to 289.  
290 to 320.  
321 to 358.  
359 to 378.

---

### SUBJECT INDEX

---

#### AIR TRANSPORT

"Aeronautical Charting and Mapping" (172) by Charles A. Schanck  
"Airport Standards" (237) by John Kyle  
"Airport Traffic and the Puerto Rico International Airport" (255) by Walter Prokosch  
"City Planning Techniques" (194) by Russell H. Riley  
"Criteria for Planning Utilization of Space for Major Air Terminal" (253) by George D. Burr  
"Determination of Radii of Curvature of Taxiways" (233) by John Hugh Jones, and Robert Horonjeff  
"Development of Miami International Airport" (359) by Earle M. Rader  
"Electronic Devices in Air Transport" (173) by F. B. Lee  
"Engineering and Economic Problems Involved in Airport Location" (204) by Robert N. Cook  
"Jet Transport Economics--Influence on Airport and Airway" (241) by J. G. Borger  
"Recent Airport Design and Development" (196) by Philip A. Hahn  
"Revenue Bond Financing for Airport Improvements" (260) by James C. Buckley  
"The Effect of Jet Aircraft on Airport Pavements: Investigations Conducted by the Bureau of Yards and Docks" (317) by J. A. Bishop  
"The Effect of Jet Aircraft on Airport Pavements: Investigations Conducted by the Corps of Engineers" (316) by Gayle McFadden  
"Zoning Maps for Airports" (174) by Benjamin Everett Beavin, Sr.

#### BEAMS

"Analysis of Continuous Composite Steel and Concrete Beams" (251) by John Sherman  
"Deflection of Laminated Beams" (331) by L. G. Clark  
"Deflections of a Circular Beam out of its Initial Plane" (375) by Enrico Volterra  
"Designing Aluminum Alloy Members for Combined End Load and Bending" (300) by H. N. Hill, E. C. Hartmann, and J. W. Clark  
"Impulsive Motion of Elasto-Plastic Beams" (287) by H. H. Bleich and M. G. Salvadori  
"Lateral Buckling of Channels and Z-Beams" (334) by H. N. Hill  
"Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291) by Mario G. Salvadori  
"Plastic Deformation of Wide-Flange Beam-Columns" (330) by Robert L. Ketter, Edmund L. Kaminsky, and Lynn S. Beedle

#### BRIDGES

"Chesapeake Bay Bridge" (304) by E. F. Ball  
"Erection of the Main River Span, Passaic River Crossing, New Jersey Turnpike" (321) by Jonathan Jones  
"Special Design Features of the Yorktown Bridge" (168) by Maurice N. Quade  
"The Gilmore Street Bridge--Jacksonville, Florida" (209) by Paul M. Huddleston  
"The John E. Mathews Bridge" (216) by Maurice N. Quade and Richard S. M. Lee

## SUBJECT INDEX

### CALIFORNIA

- "Appraisal of One-Way Street System in Sacramento, California" (234) by D. J. Faustmann
- "Building Foundations in San Francisco" (325) by Charles H. Lee
- "California Experience in Correction of Landslides and Slipouts" (235) by A. W. Root
- "California Under Control" (278) by Lansing G. Simmons
- "Cooperative Topographic Mapping in California" (277) by Conrad A. Ecklund
- "Criteria for Planning Utilization of Space for Major Air Terminal" (253) by George D. Burr
- "Pressure Surge Control at Tracy Pumping Plant" (361) by John Parmakian
- "Salt Water Barriers in the San Francisco Bay" (259) by B. L. Nishkian
- "Structural Observations of the Kern County Earthquake" (244) by Henry J. Degenkolb
- "Structural Weldment Inspection" (243) by John L. Beaton and Paul G. Jonas
- "The Fish Rescue Project at the Pacific Gas and Electric Company's Contra Costa Steam Plant" (264) by James E. Kerr
- "The Problems of Civil and Structural Design of Steam Electric Plants for the Pacific Gas and Electric Company in Central California" (342) by W. L. Dickey
- "Unsteady Flow in Open Type Pipe Irrigation Systems" (369) by E. H. Taylor, A. F. Pillsbury, T. O. Ellis, and G. A. Bekey
- "Use of Colorado River Water in California" (347) by Raymond Matthew

### CITY PLANNING

- "City Planning Techniques" (194) by Russell H. Riley
- "Community and Neighborhood Development" (285) by Russell H. Riley
- Dsc (D-138) of "The Value and Administration of a Zoning Plan" (138) See Smutz, Huber Earl
- "Recent Airport Design and Development" (196) by Philip A. Hahn
- "The Engineer's Role in Metropolitan Traffic Planning" (191) by Lloyd Braff
- "Unified Mass-Transportation System for New York" (171) by William Reid

### COLORADO

- "An Interstate Route and its Urban Connections" (329) by D. W. Ormsbee
- "Foundation Exploration for the Denver Coliseum" (326) by Ralph B. Peck

### COLUMNS

- "Plastic Buckling of Eccentrically Loaded Aluminum Alloy Columns" (299) by J. W. Clark
- "Plastic Deformation of Wide-Flange Beam-Columns" (330) by Robert L. Ketter, Edmund L. Kaminsky, and Lynn S. Beedle
- "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292) by P. P. Bijlaard, G. P. Fisher, and George Winter

### CONCRETE

- "Design of Monolithic Concrete Frame--Pre-stressed" by K. P. Milbradt and T. J. Kofodimos
- "Inelastic Behavior of Reinforced Concrete Members Subjected to Short-Time Static Loads" (286) by L. H. N. Lee

- "Movements in Structural Concrete at Conowingo Hydro Plant" (308) by Stanley Moyer and Viggio Hansen
- "Prestressed Concrete Girders, Manhattanville College, Purchase, N. Y." (265) by Curzon Dobell
- "Progress in Prestressed Concrete Construction" (266) by J. F. Jelley
- "Rocky Mountain Mass Concrete Operations" (268) by George P. McIndoe
- "The Equivalent Rectangle in Prestressed Concrete" (187) by John J. Peebles

### CONSTRUCTION

- "Chesapeake Bay Bridge" (304) by E. F. Ball
- "Construction of Granby Pumping Plant" (270) by R. J. Willson
- "Construction of the Elizabeth River Trench-Type Tunnel" (348) by Joseph Peraino
- "Construction of the Inter-American Highway" (350) by E. W. James
- "Development of the Chemical and Allied Industry in the South" (226) by C. O. Hoyer
- Dsc (372) of "East St. Louis Veterans Memorial Bridge" (150) See Sanders, A. L. R.
- "Granby Pumping Plant Foundations and Design" (269) by W. R. Judd and W. H. Wolf
- "Offshore Petroleum Installations" (289) by Jack S. Toler
- "Rocky Mountain Mass Concrete Operations" (268) by George P. McIndoe
- "Special Design Features of the Yorktown Bridge" (168) by Maurice N. Quade
- "The Development of the Pulp and Paper Industry in the South" (356) by A. G. Wakeman
- "The Problems of Civil and Structural Design of Steam Electric Plants for the Pacific Gas and Electric Company in Central California" (342) by W. L. Dickey

### DAMS

- "Statistical Review of Dam Construction" (355) by Robert A. Sutherland

### DELAWARE

- "Innovation in Primary Road Program in Delaware" (221) by Richard A. Haber

### DRAINAGE

- "Conservation of the Everglades" (242) by Herman W. Schull, Jr.
- "Hydraulic Problems of Local Interests under the Central and Southern Florida Project" (213) by Herbert C. Gee
- "Peak Discharge for Highway Drainage Design" (320) by Carl F. Izzard
- "Selection of Pumps and Design of High Volume --Low Head Pumping Stations" (229) by George F. Snodgrass
- "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319) by Martin R. Huberty
- "The Engineering Features of TVA" (240) by Clarence E. Blee

### ECONOMICS

- "Economic Aspects of Sanitary Engineering and Sanitation" (279) by Thomas deS. Furman
- "Jet Transport Economics--Influence on Air-port and Airway" (241) by J. G. Borger

# SUBJECT INDEX

## ECONOMICS

- "Planning and Operating Turnpikes" (214) by Charles M. Noble
- "Revenue Bond Financing for Airport Improvements" (260) by James C. Buckley
- "Some Economic Aspects of Waterway Projects" (318) by Haywood R. Falson
- "The Development of the Pulp and Paper Industry in the South" (356) by A. G. Wakeman

## EDUCATION

- "Highway Engineering Educational Programs and Problems" (236) by Harmer E. Davis and Ralph A. Moyer

## ELECTRONICS

- "Electronics in Surveying" (284) by C. I. Aslakson
- "The Importance of Shoran Surveying in the Southern Hemisphere" (353) by Carl I. Aslakson

## EROSION

- "Some Practical Facts about Beach Erosion in Florida" (238) by Morris N. Lipp

## FLORIDA

- "Community and Neighborhood Development" (285) by Russell H. Riley
- "Conservation of the Everglades" (242) by Herman W. Schull, Jr.
- "Current Research in Sanitary Engineering at the University of Florida" (207) by David B. Smith
- "Design of Recent Additions to Key West Aqueduct" (288) by Walter J. Parks, Jr.
- "Earth Overflow Dike, Jim Woodruff Dam" (222) by James M. Polatty
- "Frequency of Excessive Rainfalls in Florida" (366) by David B. Smith
- "Hydraulic Problems of Local Interests under the Central and Southern Florida Project" (213) by Herbert C. Gee
- "Load Tests of Soils in the Miami Area" (215) by J. Calvin Jureit
- "Mapping the Unknown Everglades" (210) by Jon S. Beazley
- "Sand Compaction by Vibroflotation" (200) by Elio D'Appolonia, Callix E. Miller, Jr., and Thomas M. Ware
- "Selection of Pumps and Design of High Volume --Low Head Pumping Stations" (229) by George F. Snodgrass
- "Some Practical Facts about Beach Erosion in Florida" (238) by Morris N. Lipp
- "The John E. Mathews Bridge" (216) by Maurice N. Quade and Richard S. M. Lee
- "The Gilmore Street Bridge--Jacksonville, Florida" (209) by Paul M. Huddleston
- "The Key West Aqueduct" (208) by P. Corradi and Burr Lenhart
- "Topographic Mapping by the U. S. Geological Survey in Florida" (212) by Daniel Kennedy
- "Unusual Foundation Conditions Encountered on the Central and Southern Florida Project" (227) by Paul H. Shea

## FOUNDATIONS

- "Aseismic Design of Elastic Structures Founded on Firm Ground" (349) by L. E. Goodman, E. Rosenbluth, and N. M. Newmark

- "Building Foundations in San Francisco" (325) by Charles H. Lee
- "Field Penetration Tests for Selection of Sheepfoot Rollers" (363) by S. J. Johnson and W. G. Shockley
- "Foundation Exploration for the Denver Coliseum" (326) by Ralph B. Peck
- "Granby Pumping Plant Foundations and Design" (269) by W. R. Judd and W. H. Wolf
- "Highway Bridges on Deep Foundations" (276) by Louis Duclos
- "Photoelastic Analogy for Non-Homogeneous Foundations" (211) by Allen J. Curtis and F. E. Richart, Jr.
- "Pile Loading Tests, Morganza Floodway Control Structure" (324) by Charles I. Mansur and John A. Focht
- "Relief Well Systems for Dams and Levees" (192) by W. J. Turnbull and C. I. Mansur
- "Studies of Settlement and Seepage at Clark Hill Dam during and after Construction" (220) by Frank M. Bell
- "Unusual Foundation Conditions Encountered on the Central and Southern Florida Project" (227) by Paul H. Shea
- "Vertical Sand Drains for Stabilization of Muck-Peat Soils" (351) by J. C. Carpenter and Edward S. Barber

## FRAMES

- "Design of Frames by Relaxation of Yield-Hinges" (322) by J. Morley English
- "Joint Translation by Cantilever Moment Distribution" (298) by L. E. Grinter and C. H. Tsao

## GEORGIA

- "Studies of Settlement and Seepage at Clark Hill Dam during and after Construction" (220) by Frank M. Bell

## HIGHWAYS

- "A Mathematical Examination of Spiraled Compound Curves" (357) by T. F. Hickerson
- "An Interstate Route and its Urban Connections" (329) by D. W. Ormsbee
- "Analysis of Corrective Actions for Highway Landslides" (190) by R. F. Baker
- "Appraisal of One-Way Street System in Sacramento, California" (234) by D. J. Faustmann
- "Bridges on West Virginia Turnpike" (263) by Elmer K. Timby
- "California Experience in Correction of Landslides and Slipouts" (235) by A. W. Root
- "Construction of the Inter-American Highway" (350) by E. W. James
- Dsc (D-121) of "Rate of Change of Grade per Station" (121) See Brownell, Clarence J.
- "Highway Bridges on Deep Foundations" (276) by Louis Duclos
- "Highway Engineering Educational Programs and Problems" (236) by Harmer E. Davis and Ralph A. Moyer
- "Innovation in Primary Road Program in Delaware" (221) by Richard A. Haber
- "Peak Discharge for Highway Drainage Design" (320) by Carl F. Izzard
- "Planning and Operating Turnpikes" (214) by Charles M. Noble
- "The Engineer's Role in Metropolitan Traffic Planning" (191) by Lloyd Braff

## SUBJECT INDEX

### HIGHWAYS

- "Trafficability of Soil as Related to Mobility of Vehicles" (328) by R. C. Stewart and S. J. Weiss
- "Vertical Sand Drains for Stabilization of Muck-Peat Soils" (351) by J C Carpenter and Edward S. Barber

### HYDRAULICS

- "A Direct Step Method for Computing Water-Surface Profiles" (180) by Arthur A. Ezra
- "Analysis of Water Hammer by Characteristics" (274) by C. A. M. Gray
- "Applications of the Relaxation Technique in Fluid Mechanics" (223) by John S. McNown, En-Yun Hsu and Chia-Shun Yih
- "Dam Modifications Checked by Hydraulic Models" (184) by E. S. Harrison and Carl E. Kindsvater
- "Design of Side Walls in Chutes and Spillways" (175) by D. B. Gumensky
- Dsc (D-122) of "Engineering Aspects of Diffraction and Refraction" (122) See Johnson, J. W.
- Dsc (D-123) of "Long-Period Waves or Surges in Harbors" (123) See Carr, John H.
- Dsc (D-134) of "Solution of an Hydraulic Problem by Analog Computer" (134) See Glover, R. E.
- Dsc (D-135) of "Application of Electronic Flow Routing Analog" (135) See Kohler, Max A.
- Dsc (D-141) of "Effect of Entrance Conditions on Diffuser Flow" (141) See Robertson, J. M.
- "Discharge Characteristics of Tainter Gates" (295) by Arthur Toch
- "Effect of Well Screens on Flow into Wells" (365) by Jack S. Petersen, Carl Rohwer, and M. L. Albertson
- "Frequency of Excessive Rainfalls in Florida" (366) by David B. Smith
- "Friction Factors for Turbulent Flow in Pipes" (197) by Edward F. Wilsey
- "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362) by M. I. Rorabaugh
- "High Intensity Rainfall and Major Floods in Puerto Rico" (364) by Miguel A. Quinones
- "High Velocity Tests in a Penstock" (297) by Maxwell F. Burke
- "Hydraulic Fundamentals of Closed Conduit Spillways" (354) by Fred W. Blaisdell
- "Intrusion of Sea Water in Tidal Sections of Fresh Water Streams" (358) by C. P. Lindner
- "Laminar to Turbulent Flow in a Wide Open Channel" (188) by W. M. Owen
- "Mechanics of Manifold Flow" (258) by John S. McNown
- "Pressure Surge Control at Tracy Pumping Plant" (361) by John Parmakian
- "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280) by E. W. Lane
- "Rainfall Studies Using Rain-Gage Networks and Radar" (178) by H. E. Hudson, Jr., G. E. Stout, and F. A. Huff
- "Rating Curves for Flow Over Drum Gates" (169) by Joseph N. Bradley
- "River-Bed Scour During Floods" (254) by E. W. Lane and W. M. Borland
- "Settling Rates of Suspensions in Solids Contact Units" (186) by A. A. Kalinske
- "Snow Hydrology for Multiple-Purpose Reservoirs" (189) by Herbert S. Riesbol

- "The Development of the Turbulent Boundary Layer on Steep Slopes" (281) by William J. Bauer
- "Total Sediment Load Measured in Turbulence Flume" (230) by P. C. Benedict, M. L. Albertson, and D. Q. Matejka
- "Velocity Measurements of Air-Water Mixtures" (193) by Lorenz G. Straub, John M. Killen, and Owen P. Lamb

### HYDROLOGY

- "Frequency of Excessive Rainfalls in Florida" (366) by David B. Smith
- "High Intensity Rainfall and Major Floods in Puerto Rico" (364) by Miguel A. Quinones
- "Rainfall Studies Using Rain-Gage Networks and Radar" (178) by H. E. Hudson, Jr., G. E. Stout and F. A. Huff
- "Snow Hydrology for Multiple-Purpose Reservoirs" (189) by Herbert S. Riesbol

### ILLINOIS

- "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219) by L. T. Wylly, R. W. Kluge, K. H. Lenzen, L. B. McGammon, M. B. Lagaard, and E. W. Larson, Jr.
- "Rainfall Studies Using Rain-Gage Networks and Radar" (178) by H. E. Hudson, Jr., G. E. Stout and F. A. Huff
- "Sewage Aeration Practice in the Sanitary District of Chicago" (310) by Norval E. Anderson

### IRRIGATION

- "Conservation of the Everglades" (242) by Herman W. Schull, Jr.
- "Hydraulic Problems of Local Interests under the Central and Southern Florida Project" (213) by Herbert C. Gee
- "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280) by E. W. Lane
- "Selection of Pumps and Design of High Volume--Low Head Pumping Stations" (229) by George F. Snodgrass
- "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319) by Martin R. Huberty
- "Statutory Control of Ground Water" (346) by S. T. Harding
- "Unsteady Flow in Open Type Pipe Irrigation Systems" (369) by E. H. Taylor, A. F. Pillsbury, T. O. Ellis, and G. A. Bekey
- "Use of Colorado River Water in California" (347) by Raymond Matthew

### LEVEES

- "Wave-Wash Control on Mississippi River Levees" (275) by Rudolf Hertzberg

### LOADING

- "Design of Side Walls in Chutes and Spillways" (175) by D. B. Gumensky
- "Group Loadings Applied to the Analysis of Frames" (183) by I. F. Morrison
- "Load Tests of Soils in the Miami Area" (215) by J. Calvin Jureit
- "Live Loading for Long-Span Highway Bridges" (198) by R. J. Ivy, T. V. Lin, Stewart Mitchell, N. C. Raab, V. J. Richey, and C. F. Scheffey

# SUBJECT INDEX

## LOADING

- "Nonelastic Behavior of Bridges Under Impulsive Loads" (185) by S. J. Fraenkel and L. E. Grinter
- "The Effects on Structures of Winds of Hurricane Force" (206) by Herbert S. Saffir
- "Wind Loads on Truss Bridges" (201) by John M. Biggs
- "Wind Velocities During Hurricanes" (218) by Robert C. Gentry

## MAPPING

- "Aeronautical Charting and Mapping" (172) by Charles A. Schanck
- "California Under Control" (278) by Lansing G. Simmons
- "Cooperative Topographic Mapping in California" (277) by Conrad A. Ecklund
- "Electronic Devices in Air Transport" (173) by F. B. Lee
- "Mapping the Unknown Everglades" (210) by Jon S. Beazley
- "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305) by Benjamin Everett Beavin, Sr.
- "Topographic Mapping by the U. S. Geological Survey in Florida" (212) by Daniel Kennedy
- "Zoning Maps for Airports" (174) by Benjamin Everett Beavin, Sr.
- Dsc (367) of "Aeronautical Charting and Mapping" (172) See Schanck, Charles A.
- Dsc (367) of "Topographic Mapping in Kentucky" (151) See Miles, Phil M.
- Dsc (367 and 370) of "Zoning Maps for Airports" (174) See Beavin, Benjamin Everett, Sr.

## MECHANICS

- "An Experimental Investigation and Limit Analysis of Net Area in Tension" (296) by W. G. Brady and D. C. Drucker
- "Applications of the Relaxation Technique in Fluid Mechanics" (223) by John S. McNowen, En-Yun Hsu, and Chia-Shun Yih
- "Bending of a Constrained Circular Beam Resting on an Elastic Foundation" (205) by Enrico Volterra and Randall Chung
- "Deflection of Laminated Beams" (331) by L. G. Clark
- "Deflections of a Circular Beam out of its Initial Plane" (375) by Enrico Volterra
- "Designing Aluminum Alloy Members for Combined End Load and Bending" (300) by H. N. Hill, E. C. Hartmann, and J. W. Clark
- Dsc (374) of "Radial Impact on an Elastically Supported Ring" (157) See Wenk, Edward, Jr.
- "Earthquake Stresses in Shear Buildings" (177) by M. G. Salvadori
- "Electrical Analogs of Statically Loaded Structures" (376) by Frederick L. Ryder
- "Experimental Analysis" (224) by D. H. Pletta and D. Frederick
- "Impulsive Motion of Elasto-Plastic Beams" (287) by H. H. Bleich and M. G. Salvadori
- "Inelastic Behavior of Reinforced Concrete Members Subjected to Short-Time Static Loads" (286) by L. H. N. Lee
- "Lateral Buckling of Channels and Z-Beams" (334) by H. N. Hill
- "Mechanics of Manifold Flow" (258) by John S. McNowen

- "Nonelastic Behavior of Bridges Under Impulsive Loads" (185) by S. J. Fraenkel and L. E. Grinter
- "Numerical Analysis of Continuous Frames in Space" (261) by James Michalos
- "Numerical Analysis of Frames with Curved Girders" (250) by James Michalos
- "Photoelastic Analogy for Non-Homogeneous Foundations" (211) by Allen J. Curtis and F. E. Richart, Jr.
- "Plastic Buckling of Eccentrically Loaded Aluminum Alloy Columns" (299) by J. W. Clark
- "Plastic Deformation of Wide-Flange Beam-Columns" (330) by Robert L. Ketter, Edmund L. Kaminsky, and Lynn S. Beedle
- "Plates with Boundary Conditions of Elastic Support" (199) by S. J. Fuchs
- "Post-Buckling Strength of Redundant Trusses" (332) by E. F. Masur
- "Stiffness Charts for Gusseted Members Under Axial Load" (179) by John E. Goldberg
- "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292) by P. P. Bijlaard, G. P. Fisher, and George Winter
- "The Application of Heaviside's Step-Function to Beam Problems" (202) by John E. Goldberg
- "The Application of the Power Series Transform to Linear Difference Equations in Engineering" (225) by Leonard McFadden
- "The Development of the Turbulent Boundary Layer on Steep Slopes" (281) by William J. Bauer

## MODELS

- "Dam Modifications Checked by Hydraulic Models" (184) by E. S. Harrison and Carl E. Kindsvater
- "Experimental Analysis" (224) by D. H. Pletta and D. Frederick
- "Total Sediment Load Measured in Turbulence Flume" (230) by P. C. Benedict, M. L. Albertson, and D. Q. Matejka

## NEW JERSEY

- "Erection of the Main River Span, Passaic River Crossing, New Jersey Turnpike" (321) by Jonathan Jones

## NEW YORK

- "Prestressed Concrete Girders, Manhattanville College, Purchase, N. Y." (265) by Curzon Dobell
- "Sewage Aeration Practice in New York City" (307) by Richard H. Gould
- "Unified Mass-Transportation System for New York" (171) by William Reid

## PAVEMENTS

- "Special Procedures for Pavement Design" (195) by L. A. Palmer
- "The Effect of Jet Aircraft on Airport Pavements: Investigations Conducted by the Bureau of Yards and Docks" (317) by J. A. Bishop
- "The Effect of Jet Aircraft on Airport Pavements: Investigations Conducted by the Corps of Engineers" (316) by Gayle McFadden

## PENNSYLVANIA

- "Movements in Structural Concrete at Conowingo Hydro Plant" (308) by Stanley Moyer and Viggo Hansen



# SUBJECT INDEX

## PETROLEUM

- "Offshore Petroleum Installations" (289) by Jack S. Toler

## PIPELINES

- "Analysis of Water Hammer by Characteristics" (274) by C. A. M. Gray
- "Charts for Designing Air Chambers for Pump Discharge Lines" (273) by W. E. Evans and C. C. Crawford
- "Friction Factors for Turbulent Flow in Pipes" (197) by Edward F. Wilsey
- "Unsteady Flow in Open Type Pipe Irrigation Systems" (369) by E. H. Taylor, A. F. Pillsbury, T. O. Ellis, and G. A. Bekey

## PLATES

- "Hipped Plate Analysis, Considering Joint Displacements" (182) by Ibrahim Gaafar
- "Plates with Boundary Conditions of Elastic Support" (199) by S. J. Fuchs

## POWER

- "Charts for Designing Air Chambers for Pump Discharge Lines" (273) by W. E. Evans and C. C. Crawford
- Dsc (D-129) of "Analysis of Arch Dams of Variable Thickness" (129) See Perkins, W. A.
- Dsc (378) of "Ice Pressure Against Dams: Experimental Investigations by the Bureau of Reclamation" (162) See Monfore, G. E.
- Dsc (378) of "Ice Pressure Against Dams: Studies of the Effects of Temperature Variation" (160) See Lofquist, Bertil
- "Movements in Structural Concrete at Conowingo Hydro Plant" (308) by Stanley Moyer and Viggio Hansen
- "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294) by Adolf A. Meyer
- "Statistical Review of Dam Construction" (355) by Robert A. Sutherland

## PUBLICATIONS

- "Publication Procedure for Technical Papers" (290) by the Board of Direction, Committee on Publications

## PUERTO RICO

- "Airport Traffic and the Puerto Rico International Airport" (255) by Walter Prokosh
- "High Intensity Rainfall and Major Floods in Puerto Rico" (364) by Miguel A. Quinones

## REPORTS

- "Advances in Sewage Treatment and Present Status of the Art: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (176) Ernest W. Whitlock, Chmn
- "Advances in Sewage Treatment in the Period From October 1, 1951 to September 1, 1952: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (248) Kerwin L. Mick, Chmn
- "Publication Procedure for Technical Papers" (290) by the Board of Direction, Committee on Publications
- "Water Supply Engineering: Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September

30, 1951" (164) Ernest W. Whitlock, Chmn

## RESERVOIRS

- "Control of Aquatic Growths in Reservoirs by Copper Sulfate and Secondary Effects of Such Treatment" (203) by Ray L. Derby and D. W. Graham
- "Control of Drinking Water Quality in Open Distribution Reservoirs" (232) by Blair I. Burnson

## RIVERS

- "Construction of the Elizabeth River Trench-Type Tunnel" (348) by Joseph Peraino
- "Planning and Executing a Uniform Pollution Abatement Program for the Kansas River Basin" (303) by Dwight F. Metzler
- "Slackwater Improvement of the Columbia River" (181) by O. E. Walsh
- "Special Design Features of Water Works Facilities Handling Highly Turbid Waters" (309) by R. G. Kincaid
- "The Engineering Features of 'VA' (240) by Clarence E. Blee
- "Use of Colorado River Water in California" (347) by Raymond Matthew
- "Wave-Wash Control on Mississippi River Levees" (275) by Rudolf Hertzberg

## ROCKY MOUNTAINS

- "Construction of Granby Pumping Plant" (270) by R. J. Willson
- "Granby Pumping Plant Foundations and Design" (269) by W. R. Judd and W. H. Wolf
- "Rocky Mountain Mass Concrete Operations" (268) by George P. McIndoe

## SANITARY ENGINEERING

- "Administration: The Key to Effective Application" (338) by Vinton W. Bacon
- "Algae Responsible for Odor and Taste in Public Water Supplies" (267) by George J. Turre
- "An Analysis of Water Quality Criteria" (231) by J. E. McKee and Vinton W. Bacon
- "Composting of Garbage and Sewage Sludge" (312) by Eric Eweson
- "Concepts of Engineering Biotechnology in Occupational Health" (352) by Alvin F. Meyer
- "Control of Aquatic Growths in Reservoirs by Copper Sulfate and Secondary Effects of Such Treatment" (203) by Ray L. Derby and D. W. Graham
- "Control of Drinking Water Quality in Open Distribution Reservoirs" (232) by Blair I. Burnson
- "Current Research in Sanitary Engineering at the University of Florida" (207) by David B. Smith
- "Design of Recent Additions to Key West Aqueduct" (288) by Walter J. Parks, Jr.
- Dsc (377) of "Underground Corrosion of Piping" (130) See Brannon, R. A.
- "Economic Aspects of Sanitary Engineering and Sanitation" (279) by Thomas deS. Furman
- "Flocculation and Flocculation Basins" (283) by Thomas R. Camp
- "Further Investigations of Concentration of Raw Sludge" (314) by J. F. Laboon
- "Future Developments in Sanitary Engineering" (337) by Harold B. Gotaas
- "Health, Welfare, and Development" (340) by John A. Logan



## SUBJECT INDEX

### SANITARY ENGINEERING

"Performance of Biofiltration Plants by Three Methods" (336) by R. S. Rankin

"Planning and Executing a Uniform Pollution Abatement Program for the Kansas River Basin" (303) by Dwight F. Metzler

"Public Health Importance of Water Supply and Waste Disposal Works" (252) by Daniel A. Okun

"Public Relations Aspects of Consulting Sanitary Engineering Work" (301) by M. H. Klegerman

"Putting a Sewage Treatment Plant into Operation" (257) by Benjamin Benas

"Radioisotope Removal in Modern Waste Treatment" (239) by Warren J. Kaufman and Gerhard Klein

Rt "Advances in Sewage Treatment and Present Status of the Art: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (176) Ernest W. Whitlock, Chmn

Rt "Advances in Sewage Treatment in the Period from October 1, 1951 to September 1, 1952: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (248) Kerwin L. Mick, Chmn

Rt "Water Supply Engineering: Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1951" (164) Ernest W. Whitlock, Chmn

"Settling Rates of Suspensions in Solids Contact Units" (186) by A. A. Kalinske

"Sewage Aeration Practice in New York City" (307) by Richard H. Gould

"Sewage Aeration Practice in the Sanitary District of Chicago" (310) by Norval E. Anderson

"Sewage Disposal in Tidal Estuaries" (167) by Alexander N. Diachishin, Seth G. Hess, and William T. Ingram

"Special Design Features of Water Works Facilities Handling Highly Turbid Waters" (309) by R. G. Kincaid

"Stabilization of Municipal Refuse by Composting" (302) by P. H. McGahey and Harold B. Gotaas

"The Disposal of Industrial Wastes" (247) by George E. Barnes

"The Key West Aqueduct" (208) by P. Corradi and Burr Lenhart

"The Need to Break with Tradition" (339) by Ray L. Derby

"Treatment of Large Reservoirs with Alum to Reduce Turbidity" (272) by Ray L. Derby and William K. Weight

"Water Pollution Control Policy" (335) by Paul D. Haney

"What's the Outlook for Sanitary Engineering?" (341) by Clarence W. Klassen

### SHELLS

"Stresses and Displacements in Thin Shells Composed of Cylindrical and Spherical Segments" (293) by Mario G. Salvadori

### SOIL MECHANICS

"A Concept of Slope Design of Earth Dam Embankment" (327) by C. Y. Li

"Analysis of Corrective Actions for Highway Landslides" (190) by R. F. Baker

"Anchored Bulkheads" (262) by Karl Terzaghi

"California Experience in Correction of Landslides and Slipouts" (235) by A. W. Root

"Design Curves for Anchored Steel Sheet Piling" (165) by Walter C. Boyer, and Henry M. Lummis, III

Dsc (371) of "Analysis of Ground-Water Lowering Adjacent to Open Water" (106) See Avery, Stuart B., Jr.

"Earth Overflow Dike, Jim Woodruff Dam" (222) by James M. Polatty

"Estimating the True Consolidation Behavior of Clay from Laboratory Test Results" (311) by John H. Schmertmann

"Field Penetration Tests for Selection of Sheepfoot Rollers" (363) by S. J. Johnson and W. G. Shockley

"Load Tests of Soils in the Miami Area" (215) by J. Calvin Jureit

"Reduction in Soil Strength with Increase in Density" (228) by Charles R. Foster

"Relief Well Systems for Dams and Levees" (192) by W. J. Turnbull and C. I. Mansur

"Sand Compaction by Vibroflotation" (200) by Elio D'Appolonia, Callix E. Miller, Jr., and Thomas M. Ware

"Special Procedures for Pavement Design" (195) by L. A. Palmer

"Stabilization of Soil by Silt Injection Method" (323) by George E. Johnson

"Strength Characteristics of Compacted Clays" (360) by Gerald A. Leonards

"Studies of Settlement and Seepage at Clark Hill Dam during and after Construction" (220) by Frank M. Bell

"The Design of Flexible Bulkheads" (166) by James R. Ayers, and R. C. Stokes

"The Structure of Inorganic Soil" (315) by T. William Lambe

"Trafficability of Soil as Related to Mobility of Vehicles" (328) by R. C. Stewart and S. J. Weiss

"Unusual Foundation Conditions Encountered on the Central and Southern Florida Project" (227) by Paul H. Shea

### STRUCTURAL ENGINEERING

"A Graphical Construction for the Deflection of Structural Members of Variable Moment of Inertia" (256) by Anthony Hoadley

"A Method for Calculating Stresses in Rigid Frame Corners" (249) by Harvey C. Olander

"An Engineering Approach to Blast Resistant Design" (306) by N. M. Newmark

"Analysis of Continuous Composite Steel and Concrete Beams" (251) by John Sherman

"Aseismic Design of Elastic Structures Founded on Firm Ground" (349) by L. E. Goodman, E. Rosenbluth, and N. M. Newmark

"Bending of a Constrained Circular Beam Resting on an Elastic Foundation" (205) by Enrico Volterra and Randall Chung

"Bridges on West Virginia Turnpike" (263) by Elmer K. Timby

"Design and Research for Welded Structures" (343) by LaMotte Grover

"Design of Frames by Relaxation of Yield-Hinges" (322) by J. Morley English

"Design of Monolithic Concrete Frame--Pre-stressed" (217) by K. P. Milbradt and T. J. Kofodimos

## SUBJECT INDEX

### STRUCTURAL ENGINEERING

- Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117) See Raphael, J. M.
- Dsc (D-125) of "Torsion of Plate Girders" (125) See Chang, F. K.
- Dsc (D-126) of "Variation of Wind Velocity and Gusts with Height" (126) See Sherlock, R. H.
- Dsc (D-127) of "Stresses in Deep Beams" (127) See Chow, Li
- Dsc (D-128) of "Horizontally Curved Box Beams" (128) See Cutts, Charles E.
- Dsc (D-136) of "Steady-State Forced Vibration of Continuous Frames" (136) See Looney, C. T. G.
- Dsc (D-145) of "Torsion of I-Type and H-Type Beams" (145) See Goldberg, John E.
- Dsc (373) of "East St. Louis Veterans Memorial Bridge" (150) See Sanders, A. L. R.
- "Earthquake Stresses in Shear Buildings" (177) by M. G. Salvadori
- "Electrical Analogs of Statically Loaded Structures" (376) by Frederick L. Ryder
- "Erection of the Main River Span, Passaic River Crossing, New Jersey Turnpike" (321) by Jonathan Jones
- "Fabrication and Construction of Structural Steel for Buildings" (345) by C. L. Kreidler
- "General Design of the East Delaware Water Supply Tunnel" (313) by Stanley M. Dore
- "Group Loadings Applied to the Analysis of Frames" (183) by I. F. Morrison
- "Hipped Plate Analysis, Considering Joint Displacements" (182) by Ibrahim Gaafar
- "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219) by L. T. Wylly, R. W. Kluge, K. H. Lenzen, L. B. McGammon, M. B. Lagaard, and E. W. Larson, Jr.
- "Joint Translation by Cantilever Moment Distribution" (298) by L. E. Grinter and C. H. Tsao
- "Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291) by Mario G. Salvadori
- "Live Loading for Long-Span Highway Bridges" (198) by R. J. Ivy, T. V. Lin, Stewart Mitchell, N. C. Raab, V. J. Richey, and C. F. Scheffey
- "Numerical Analysis of Continuous Frames in Space" (261) by James Michalos
- "Numerical Analysis of Frames with Curved Girders" (250) by James Michalos
- "Plates with Boundary Conditions of Elastic Support" (199) by S. J. Fuchs
- "Post-Buckling Strength of Redundant Trusses" (332) by E. F. Masur
- "Prestressed Concrete Girders, Manhattanville College, Purchase, N. Y." (265) by Curzon Dobell
- "Progress in Prestressed Concrete Construction" (266) by J. F. Jelley
- "Rapid Computation of Flexural Constants" (170) by Thomas G. Morrison
- "Special Design Features of the Yorktown Bridge" (188) by Maurice N. Quade
- "Steel for Welded Bridges and Buildings" (344) by Simon A. Greenberg
- "Stiffness Charts for Gusseted Members Under Axial Load" (179) by John E. Goldberg
- "Stresses and Displacements in Thin Shells Composed of Cylindrical and Spherical Segments" (293) by Mario G. Salvadori
- "Stress Measurements on the San Leandro Creek Bridge" (246) by Ray W. Clough and Charles F. Scheffey

- "Structural Observations of the Kern County Earthquake" (244) by Henry J. Degenkolb
- "Structural Weldment Inspection" (243) by John L. Beaton and Paul G. Jonas
- "The Amplification of Stress in Flexible Steel Arches" (245) by Robert S. Rowe
- "The Application of Heaviside's Step-Function to Beam Problems" (202) by John E. Goldberg
- "The Effects on Structures of Winds of Hurricane Force" (206) by Herbert S. Saffir
- "The Equivalent Rectangle in Prestressed Concrete" (187) by John J. Peebles
- "The Gilmore Street Bridge--Jacksonville, Florida" (209) by Paul M. Huddleston
- "The John E. Mathews Bridge" (216) by Maurice N. Quade and Richard S. M. Lee
- "The Problems of Civil and Structural Design of Steam Electric Plants for the Pacific Gas and Electric Company in Central California" (342) by W. L. Dickey
- "Wind Loads on Truss Bridges" (201) by John M. Biggs
- "Wind Velocities During Hurricanes" (218) by Robert C. Gentry

### SURVEYING

- "A Mathematical Examination of Spiraled Compound Curves" (357) by T. F. Hickerson
- "A Proposed Method for the Transit Lining of High-Speed Track" (271) by Neil R. Berndt
- "Aeronautical Charting and Mapping" (172) by Charles A. Schanck
- "Cadastral Surveys in the United States" (282) by William H. Richards
- "California Under Control" (278) by Lansing G. Simmons
- "Cooperative Topographic Mapping in California" (277) by Conrad A. Ecklund
- "Electronic Devices in Air Transport" (173) by F. B. Lee
- "Electronics in Surveying" (284) by C. L. Aslaksen
- "Mapping the Unknown Everglades" (210) by Jon S. Beazley
- "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305) by Benjamin Everett Beavin, Sr.
- "The Importance of Shoran Surveying in the Southern Hemisphere" (353) by Carl I. Aslaksen
- "Zoning Maps for Airports" (174) by Benjamin Everett Beavin, Sr.

### TRANSPORTATION

- "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305) by Benjamin Everett Beavin, Sr.
- "Unified Mass-Transportation System for New York" (171) by William Reid

### WATER SUPPLIES

- "Algae Responsible for Odor and Taste in Public Water Supplies" (267) by George J. Turre
- "An Analysis of Water Quality Criteria" (231) by J. E. McKee and Vinton W. Bacon
- "Control of Drinking Water Quality in Open Distribution Reservoirs" (232) by Blair I. Burnson
- "Design of Recent Additions to Key West Aqueduct" (288) by Walter J. Parks, Jr.
- "General Design of the East Delaware Water Supply Tunnel" (313) by Stanley M. Dore

## SUBJECT INDEX

### WATER SUPPLIES

- "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362) by M. I. Rorabaugh
- "Effect of Well Screens on Flow into Wells" (365) by Jack S. Petersen, Carl Rohwer, and M. L. Albertson
- "Public Health Importance of Water Supply and Waste Disposal Works" (252) by Daniel A. Okun
- Rt "Water Supply Engineering: Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1951" (164) Ernest W. Whitlock, Chmn
- "Special Design Features of Water Works Facilities Handling Highly Turbid Waters" (309) by R. G. Kincaid
- "Statutory Control of Ground Water" (346) by S. T. Harding
- "Treatment of Large Reservoirs with Alum to Reduce Turbidity" (272) by Ray L. Derby and William K. Weight
- "Use of Colorado River Water in California" (347) by Raymond Matthew
- "Water Pollution Control Policy" (335) by Paul D. Haney

### WATERWAYS

- "Anchored Bulkheads" (262) by Karl Terzaghi
- "Design Curves for Anchored Steel Sheet Piling" (165) by Walter C. Boyer, and Henry M. Lummins, III
- Dec (368) of "Bank Stabilization by Revetments and Dikes" (148) See Haas, Raymond H.

- "River-Bed Scour During Floods" (254) by E. W. Lane and W. M. Borland
- "Salt Water Barriers in the San Francisco Bay" (259) by B. L. Nishkian
- "Sewage Disposal in Tidal Estuaries" (167) by Alexander N. Diachishin, Seth G. Hess, and William T. Ingram
- "Slackwater Improvement of the Columbia River" (181) by O. E. Walsh
- "Some Economic Aspects of Waterway Projects" (318) by Haywood R. Faison
- "Some Practical Facts about Beach Erosion in Florida" (238) by Morris N. Lipp
- "The Design of Flexible Bulkheads" (166) by James R. Ayers, and R. C. Stokes
- "The Engineering Features of TVA" (240) by Clarence E. Blee
- "The Fish Rescue Project at the Pacific Gas and Electric Company's Contra Costa Steam Plant" (264) by James E. Kerr
- "Wave-Wash Control on Mississippi River Levees" (275) by Rudolf Hertzberg

### WELDING

- "Design and Research for Welded Structures" (343) by La Motte Grover
- "Steel for Welded Bridges and Buildings" (344) by Simon A. Greenberg
- "Structural Weldment Inspection" (243) by John L. Beaton and Paul G. Jonas

### WEST VIRGINIA

- "Bridges on West Virginia Turnpike" (263) by Elmer K. Timby

# AUTHOR INDEX

- ALBERTSON, M. L.  
See Benedict, P. C. (230)  
See Petersen, Jack S. (365)
- AMERICAN SOCIETY OF CIVIL ENGINEERS  
"Publication Procedure for Technical Papers"  
(290) by the Board of Direction, Committee on  
Publications
- ANDERSON, NORVAL E.  
"Sewage Aeration Practice in the Sanitary Dis-  
trict of Chicago" (310)
- ASLAKSON, CARL I.  
"Electronics in Surveying" (284)  
"The Importance of Shoran Surveying in the  
Southern Hemisphere" (353)
- AVERY, STUART B., JR.  
Dsc of 106: Matthew I. Rorabaugh, S. J. John-  
son, and Howard P. Hall (371)
- AYERS, JAMES R.  
"The Design of Flexible Bulkheads" (166) with  
R. C. Stokes  
Dsc of 166: W. F. Heavey, Morgan S. Campbell,  
Walter C. Boyer, P. W. Rowe, Gregory P.  
Tschebotaroff, J. Owen Lake, Nai C. Yang, and  
David Hopkins (368)
- BACON, VINTON W.  
"Administration: The Key to Effective Applica-  
tion" (338)  
See McKee, J. E. (231)
- BAINES, W. DOUGLAS  
Dsc (D-134) of "Solution of an Hydraulic Prob-  
lem by Analog Computer" (134)
- BAKER, R. F.  
"Analysis of Corrective Actions for Highway  
Landslides" (190)
- BALL, E. F.  
"Chesapeake Bay Bridge" (304)
- BARBER, EDWARD S.  
Dsc (371) of "Reduction in Soil Strength with In-  
crease in Density" (228)  
See Carpenter, J C (351)
- BARNES, GEORGE E.  
"The Disposal of Industrial Wastes" (247)
- BAUER, WILLIAM J.  
"The Development of the Turbulent Boundary  
Layer on Steep Slopes" (281)
- BEATON, JOHN L.  
"Structural Weldment Inspection" (243) with  
Paul G. Jonas
- BEAVIN, BENJAMIN EVERETT, SR.  
"Surveys and Maps--Vital to the Solution of  
Problems of Mass Transportation" (305)  
"Zoning Maps for Airports" (174)  
Dsc of 174: Harold M. Lewis (367 and 370)  
Clo (367 and 370) of "Zoning Maps for Airports"  
(174)
- BEAZLEY, JON S.  
"Mapping the Unknown Everglades" (210)
- BEEDLE, LYNN S.  
See Ketter, Robert L. (330)
- BEKEY, G. A.  
See Taylor, E. H. (369)
- BELL, FRANK M.  
"Studies of Settlement and Seepage at Clark  
Hill Dam During and After Construction" (220)
- BENAS, BENJAMIN  
"Putting a Sewage Treatment Plant into Oper-  
ation" (257)
- BENEDICT, P. C.  
"Total Sediment Load Measured in Turbulence  
Flume" (230) with M. L. Albertson and D. Q.  
Matejka
- BERNDT, NEIL R.  
"A Proposed Method for the Transit Lining of  
High-Speed Track" (271)
- BIGGS, JOHN M.  
"Wind Loads on Truss Bridges" (201)
- BIJLAARD, P. P.  
"Strength of Columns Elastically Restrained  
and Eccentrically Loaded" (292) with G. P.  
Fisher and George Winter
- BISHOP, J. A.  
"The Effect of Jet Aircraft on Airport Pave-  
ments: Investigations Conducted by the Bureau  
of Yards and Docks" (317)
- BLAISDELL, FRED W.  
"Hydraulic Fundamentals of Closed Conduit  
Spillways" (354)  
Dsc (374) of "Applications of the Relaxation  
Technique in Fluid Mechanics" (223)
- BLEE, CLARENCE E.  
"The Engineering Features of TVA" (240)  
Dsc (378) of "Recent Additions and Improve-  
ments to the Hales Bar Hydroelectric Plant" (294)
- BLEICH, H. H.  
"Impulsive Motion of Elasto-Plastic Beams"  
(287) with M. G. Salvadori
- BLENCH, T.  
Dsc (D-134) of "Solution of an Hydraulic Prob-  
lem by Analog Computer" (134)
- BLUME, JOHN A.  
Dsc (333) of "Earthquake Stresses in Shear  
Buildings" (177)
- BORGER, J. G.  
"Jet Transport Economics--Influence on Air-  
port and Airway" (241)
- BORLAND, W. M.  
See Lane, E. W. (254)

# AUTHOR INDEX

- BOYER, WALTER C.  
    "Design Curves for Anchored Steel Sheet Piling"  
    (165) with Henry M. Lummis, III  
    Dsc (368) of "The Design of Flexible Bulkheads"  
    (166)
- BRADLEY, JOSEPH N.  
    "Rating Curves for Flow Over Drum Gates"  
    (169)
- BRADY, W. G.  
    "An Experimental Investigation and Limit Analysis of Net Area in Tension" (296) with D. C. Drucker
- BRAFF, LLOYD  
    "The Engineer's Role in Metropolitan Traffic Planning" (191)
- BRANNON, R. A.  
    Dsc of 130: Lyle R. Sheppard (377)  
    Clo (377) of "Underground Corrosion of Piping" (130)
- BROWNELL, CLARENCE J.  
    Dsc of 121: T. F. Hickerson, Robert T. Howe, and E. N. Prouty (D-121)  
    Clo (D-121) of "Rate of Change of Grade per Station" (D-121)
- BUCKLEY, JAMES C.  
    "Revenue Bond Financing for Airport Improvements" (260)
- BURGESS, JOHN C.  
    Dsc (374) of "Radial Impact on an Elastically Supported Ring" (157)
- BURKE, MAXWELL F.  
    "High Velocity Tests in a Penstock" (297)
- BURNSON, BLAIR I.  
    "Control of Drinking Water Quality in Open Distribution Reservoirs" (232)
- BURR, GEORGE D.  
    "Criteria for Planning Utilization of Space for Major Air Terminal" (253)
- CAMP, THOMAS R.  
    "Flocculation and Flocculation Basins" (283)
- CAMPBELL, MORGAN S.  
    Dsc (368) of "The Design of Flexible Bulkheads" (166)
- CARLSON, ROY W.  
    Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- CARPENTER, J C  
    "Vertical Sand Drains for Stabilization of Muck-Peat Soils" (351) with Edward S. Barber
- CARR, JOHN H.  
    Dsc of 123: B. W. Wilson and John S. McNowen (D-123)  
    Clo (D-123) of "Long-Period Waves or Surges in Harbors" (123)
- CHANG, F. K.  
    Dsc of 125: Arthur P. Jentoft, Richard W. Mayo, and E. Russell Johnston (D-125)  
    Clo (D-125) with Bruce G. Johnston of "Torsion of Plate Girders" (125)
- CHOW, LI  
    Dsc of 127: Arturo M. Guzman and Cesar J. Luisoni, and William A. Conwell (D-127)  
    Clo (D-127) with Harry D. Conway and George Winter of "Stresses in Deep Beams" (127)
- CHUNG, RANDALL  
    See Volterra, Enrico (205)
- CLARK, C. O.  
    Dsc (D-135) of "Application of Electronic Flow Routing Analog" (135)
- CLARK, L. G.  
    "Deflection of Laminated Beams" (331)
- CLARK, J. W.  
    "Plastic Buckling of Eccentrically Loaded Aluminum Alloy Columns" (299)  
    See Hill, H. N. (300)
- CLEARY, EDWARD J.  
    Dsc (377) of "An Analysis of Water Quality Criteria" (231)
- CLOUGH, RAY W.  
    "Stress Measurements on the San Leandro Creek Bridge" (246) with Charles F. Scheffey
- COHEN, EDWARD  
    Dsc (D-126) of "Variation of Wind Velocity and Gusts with Height" (126)  
    Dsc (333) with Edward Laing and Leon S. Levy of "Earthquake Stresses in Shear Buildings" (177)
- COLLINS, ARTHUR L.  
    Dsc (D-141) of "Effect of Entrance Conditions on Diffuser Flow" (141)
- CONWAY, HARRY D.  
    See Chow, Li (D-127)
- CONWELL, WILLIAM A.  
    Dsc (D-127) of "Stresses in Deep Beams" (127)  
    Dsc (D-136) of "Steady-State Forced Vibration of Continuous Frames" (136)
- COOK, ROBERT N.  
    "Engineering and Economic Problems Involved in Airport Location" (204)
- COOPER, ALFRED J.  
    Dsc (D-135) of "Application of Electronic Flow Routing Analog" (135)
- CORRADI, P.  
    "The Key West Aqueduct" (208) with Burr Lenhart  
    Dsc of 208: H. Alden Foster and James Hannan, Jr. (377)
- CRAWFORD, C. C.  
    See Evans, W. E. (273)

# AUTHOR INDEX

- CURTIS, ALLEN J.  
"Photoelastic Analogy for Non-Homogeneous Foundations" (211) with F. E. Richart, Jr.
- CUTTS, CHARLES E.  
Dsc of 128: A. George Mallis, and DeForest A. Matteson, Jr. (D-128)  
Clo (D-128) of "Horizontally Curved Box Beams" (128)
- D'APPOLONIA, ELIO  
"Sand Compaction by Vibroflotation" (200) with Callix E. Miller, Jr. and Thomas M. Ware
- DAUM, C. R.  
See Glover, R. E. (D-134)
- DAVIS, HARMER E.  
"Highway Engineering Educational Programs and Problems" (236) with Ralph A. Moyer
- DEGENKOLB, HENRY J.  
"Structural Observations of the Kern County Earthquake" (244)
- de la SAYETTE, E. R.  
Dsc (368) of "Bank Stabilization by Revetments and Dikes" (148)
- DERBY, RAY L.  
"Control of Aquatic Growths in Reservoirs by Copper Sulfate and Secondary Effects of Such Treatment" (203) with D. W. Graham  
"The Need to Break with Tradition" (339)  
"Treatment of Large Reservoirs with Alum to Reduce Turbidity" (272) with William K. Weight
- DIACHISHIN, ALEXANDER N.  
"Sewage Disposal in Tidal Estuaries" (167) with Seth G. Hess and William T. Ingram
- DICKEY, W. L.  
"The Problems of Civil and Structural Design of Steam Electric Plants for the Pacific Gas and Electric Company in Central California" (342)
- DOBELL, CURZON  
"Prestressed Concrete Girders, Manhattanville College, Purchase, N. Y." (265)
- DORE, STANLEY M.  
"General Design of the East Delaware Water Supply Tunnel" (313)
- DRUCKER, D. C.  
See Brady, W. G. (296)
- DUCLOS, LOUIS  
"Highway Bridges on Deep Foundations" (276)
- ECKLUND, CONRAD A.  
"Cooperative Topographic Mapping in California" (277)
- ELLS, T. O.  
See Taylor, E. H. (369)
- ENGLISH, J. MORLEY  
"Design of Frames by Relaxation of Yield-Hinges" (322)
- EVANS, W. E.  
"Charts for Designing Air Chambers for Pump Discharge Lines" (273) with C. C. Crawford
- EWESON, ERIC  
"Composting of Garbage and Sewage Sludge" (312)
- EZRA, ARTHUR E.  
"A Direct Step Method for Computing Water-Surface Profiles" (180)
- FABIAN, E. S.  
Dsc (367 and 370) of "Aeronautical Charting and Mapping" (172)
- FAISON, HAYWOOD R.  
"Some Economic Aspects of Waterway Projects" (318)
- FAUSTMANN, D. J.  
"Appraisal of One-Way Street System in Sacramento, California" (234)
- FISHER, G. P.  
See Bijlaard, P. P. (292)
- FOCHT, JOHN A.  
See Mansur, Charles I. (324)
- FOSTER, CHARLES R.  
"Reduction in Soil Strength with Increase in Density" (228)  
Dsc of 228: E. S. Barber and George R. Halton (371)
- FOSTER, H. ALDEN  
Dsc (377) with James Hannan, Jr. of "The Key West Aqueduct" (208)
- FRAENKEL, S. J.  
Dsc (373) of "An Engineering Approach to Blast Resistant Design" (306)
- FREDERICK, D.  
See Pletta, D. H. (224)
- FRESEN, M. H.  
See Thomas, Percy H. (D-126)
- FUCHS, S. J.  
"Plates with Boundary Conditions of Elastic Support" (199)
- FURMAN, THOMAS deS.  
"Economic Aspects of Sanitary Engineering and Sanitation" (279)
- GAAFAR, IBRAHIM  
"Hipped Plate Analysis, Considering Joint Displacements" (182)
- GEE, HERBERT C.  
"Hydraulic Problems of Local Interests under the Central and Southern Florida Project" (213)
- GENTRY, ROBERT C.  
"Wind Velocities During Hurricanes" (218)



# AUTHOR INDEX

- GERSTLE, KURT H.  
Dsc (D-145) of "Torsion of I-Type and H-Type Beams" (145)
- GLOVER, R. E.  
Dsc of 134: J. van Veen, W. Douglas Baines, Jr., and T. Blench (D-134)  
Clo (D-134) with D. J. Hebert and C. R. Daum of "Solution of an Hydraulic Problem by Analog Computer" (134)
- GOLDBERG, JOHN E.  
"Stiffness Charts for Gusseted Members Under Axial Load" (179)  
"The Application of Heaviside's Step-Function to Beam Problems" (202)  
Dsc of 145: Kurt H. Gerstle (D-145)  
Dsc of 179: Leonard K. Stevens (333)  
Dsc of 202: Telemaco van Langendonck (333); Bruno Poggi (374); and Herbert Saunders (374)  
Clo (D-145) of "Torsion of I-Type and H-Type Beams" (145)  
Clo (333) of "Stiffness Charts for Gusseted Members Under Axial Load" (179)
- GOODALL, GEORGE E.  
Dsc (D-129) of "Analysis of Arch Dams of Variable Thickness" (129)
- GOODMAN, L. E.  
"Aseismic Design of Elastic Structures Founded on Firm Ground" (349) with E. Rosenblueth and N. M. Newmark
- GOTAAS, HAROLD B.  
"Future Developments in Sanitary Engineering" (337)  
See McGauhey, P. H. (302)
- GOULD, RICHARD H.  
"Sewage Aeration Practice in New York City" (307)
- GRAHAM, D. W.  
See Derby, Ray L. (203)
- GRAY, C. A. M.  
"Analysis of Water Hammer by Characteristics" (274)
- GREENBERG, SIMON A.  
"Steel for Welded Bridges and Buildings" (344)
- GRINTER, L. E.  
"Joint Translation by Cantilever Moment Distribution" (298) with C. H. Tsao
- GROVER, LA MOTTE  
"Design and Research for Welded Structures" (343)
- GUMENSKY, D. B.  
"Design of Side Walls in Chutes and Spillways" (175)
- GUZMAN, ARTURO M.  
Dsc (D-127) with Cesar J. Luisoni of "Stresses in Deep Beams" (127)
- HAAS, RAYMOND H.  
Dsc of 148: Harrison V. Pittman, E. R. de la Sayette, and Serge Leliavsky (368)
- HABER, RICHARD A.  
"Innovation in Primary Road Program in Delaware" (221)
- HAHN, PHILIP A.  
"Recent Airport Design and Development" (196)
- HALL, HOWARD P.  
Dsc (371) of "Analysis of Ground-Water Lowering Adjacent to Open Water" (106)
- HALTON, GEORGE R.  
Dsc (371) of "Reduction in Soil Strength with Increase in Density" (228)
- HANEY, PAUL D.  
"Water Pollution Control Policy" (335)
- HANNAN, JAMES, JR.  
See Foster, H. Alden (377)
- HANSEN, VIGGO  
See Moyer, Stanley (308)
- HANSON, J. A.  
Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- HARDING, S. T.  
"Statutory Control of Ground Water" (346)
- HARRISON, E. S.  
"Dam Modifications Checked by Hydraulic Models" (184) with Carl E. Kindsvater
- HARTMANN, E. C.  
See Hill, H. N. (300)
- HEAVEY, W. F.  
Dsc (368) of "The Design of Flexible Bulkheads" (166)
- HEBERT, D. J.  
See Glover, R. E. (D-134)
- HERTZBERG, RUDOLF  
"Wave-Wash Control on Mississippi River Levees" (275)
- HESS, SETH G.  
See Diachishin, Alexander N. (167)
- HICKERSON, T. F.  
"A Mathematical Examination of Spiraled Compound Curves" (357)  
Dsc (D-121) of "Rate of Change of Grade per Station" (121)
- HILL, H. N.  
"Designing Aluminum Alloy Members for Combined End Load and Bending" (300) with E. C. Hartmann and J. W. Clark  
"Lateral Buckling of Channels and Z-Beams" (334)
- HOADLEY, ANTHONY  
"A Graphical Construction for the Deflection of Structural Members of Variable Moment of Inertia" (256)



# AUTHOR INDEX

- HOPKINS, DAVID  
Dsc (368) of "The Design of Flexible Bulkheads" (166)
- HORONJEFF, ROBERT  
See Jones, John Hugh (233)
- HOROWITZ, HENRY  
Dsc (D-138) of "The Value and Administration of a Zoning Plan" (138)
- HOYE, ROBERT T.  
Dsc (D-121) of "Rate of Change of Grade per Station" (121)
- HOYER, C. O.  
"Development of the Chemical and Allied Industry in the South" (226)  
Dsc of 226: R. A. Kampmeier (372)
- HSU, EN-YUN  
See McNow, John S. (223)
- HUBERTY, MARTIN R.  
"Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319)
- HUDDLESTON, PAUL M.  
"The Gilmore Street Bridge--Jacksonville, Florida" (209)
- HUDSON, H. E., JR.  
"Rainfall Studies Using Rain-Gage Networks and Radar" (178) with G. E. Stout, and F. A. Huff
- HUFF, F. A.  
See Hudson, H. E., Jr. (178)
- INGRAM, WILLIAM T.  
See Diachishin, Alexander N. (167)
- IVY, R. J.  
"Live Loading for Long-Span Highway Bridges" (198) with T. V. Lin, Stewart Mitchell, N. C. Raab, V. J. Richey, and C. F. Scheffey
- IZZARD, CARL F.  
"Peak Discharge for Highway Drainage Design" (320)
- JAMES, E. W.  
"Construction of the Inter-American Highway" (350)
- JAMESON, W. H.  
Dsc (372 and 373) of "East St. Louis Veterans Memorial Bridge" (150)
- JELLEY, J. F.  
"Progress in Prestressed Concrete Construction" (266)
- JENTOFT, ARTHUR P.  
Dsc (D-125) with Richard W. Mayo and E. Russell Johnston of "Torsion of Plate Girders" (125)
- JOHNSON, GEORGE E.  
"Stabilization of Soil by Silt Injection Method" (323)
- JOHNSON, J. W.  
Dsc of 122: M. E. Stelzriede (D-122)  
Clo (D-122) of "Engineering Aspects of Diffraction and Refraction" (122)
- JOHNSON, S. J.  
"Field Penetration Tests for Selection of Sheepfoot Rollers" (363) with W. G. Shockley  
Dsc (371) of "Analysis of Ground-Water Lowering Adjacent to Open Water" (106)
- JOHNSTON, BRUCE G.  
See Chang, F. K.
- JOHNSTON, E. RUSSELL  
See Jentoft, Arthur P. (D-125)
- JONAS, PAUL G.  
See Beaton, John L. (243)
- JONES, JOHN HUGH  
"Determination of Radii of Curvature of Taxiways" (233) with Robert Horonjeff
- JONES, JONATHAN  
"Erection of the Main River Span, Passaic River Crossing, New Jersey Turnpike" (321)
- JOSEPHS, A. C.  
Dsc (D-129) of "Analysis of Arch Dams of Variable Thickness" (129)
- JUDD, W. R.  
"Granby Pumping Plant Foundations and Design" (269) with W. H. Wolf
- JURETT, J. CALVIN  
"Load Tests of Soils in the Miami Area" (215)
- KALINSKE, A. A.  
"Settling Rates of Suspensions in Solids Contact Units" (186)
- KAMINSKY, EDMUND L.  
See Ketter, Robert L. (330)
- KÄMMER, H. A.  
Dsc (378) of "Movements in the Structural Concrete at Conowingo Hydro Plant" (308)
- KAMPMEIER, R. A.  
Dsc (372) of "Development of the Chemical and Allied Industry in the South" (226)
- KAUFMAN, WARREN J.  
"Radioisotope Removal in Modern Waste Treatment" (239) with Gerhard Klein
- KENNEDY, DANIEL  
"Topographic Mapping by the U. S. Geological Survey in Florida" (212)
- KERR, JAMES E.  
"The Fish Rescue Project at the Pacific Gas and Electric Company's Contra Costa Steam Plant" (264)
- KETCHUM, MILO S.  
Dsc (373) of "The Amplification of Stress in Flexible Steel Arches" (245)

# AUTHOR INDEX

- KETTER, ROBERT L.  
 "Plastic Deformation of Wide-Flange Beam-Columns" (330) with Edmund L. Kaminsky and Lynn S. Beedle
- KILLEN, JOHN M.  
 See Straub, Lorenz G. (193)
- KINCAID, R. G.  
 "Special Design Features of Water Works Facilities Handling Highly Turbid Waters" (309)
- KINDSVATER, CARL E.  
 See Harrison, E. S. (184)
- KIRN, FAIRFAX D.  
 Dsc (D-129) with Gurmukh S. Sarkaria of "Analysis of Arch Dams of Variable Thickness" (129)
- KLASSEN, CLARENCE W.  
 "What's the Outlook for Sanitary Engineers?" (341)
- KLEGERMAN, M. H.  
 "Public Relations Aspects of Consulting Sanitary Engineering Work" (301)
- KLEIN, GERHARD  
 See Kaufman, Warren J. (239)
- KLUGE, R. W.  
 See Wyly, L. T. (219)
- KOFODIMOS, T. J.  
 See Milbradt, K. P. (217)
- KOHLER, MAX A.  
 Dsc of 135: Alfred J. Cooper, and C. O. Clark (D-135)  
 Clo (D-135) of "Application of Electronic Flow Routing Analog" (135)
- KOLUPAILA, STEPONAS  
 Dsc (D-141) of "Effect of Entrance Conditions on Diffuser Flow" (141)
- KREIDLER, C. L.  
 "Fabrication and Construction of Structural Steel for Buildings" (345)
- KYLE, JOHN  
 "Airport Standards" (237)
- LABOON, J. F.  
 "Further Investigations of Concentration of Raw Sludge" (314)
- LAGAARD, M. B.  
 See Wyly, L. T. (219)
- LAING, EDWARD  
 See Cohen, Edward (333)
- LAKE, J. OWEN  
 Dsc (368) of "The Design of Flexible Bulkheads" (166)
- LAMB, OWEN P.  
 See Straub, Lorenz G. (193)
- LAMBE, T. WILLIAM  
 "The Structure of Inorganic Soil" (315)
- LANE, E. W.  
 "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)  
 "River-Bed Scour During Floods" (254) with W. M. Borland
- LARSON, E. W., JR.  
 See Wyly, L. T. (219)
- LEE, CHARLES H.  
 "Building Foundations in San Francisco" (325)
- LEE, F. B.  
 "Electronic Devices in Air Transport" (173)  
 Dsc of 173: P. C. Sandretto (367 and 370)  
 Clo (367 and 370) of "Electronic Devices in Air Transport" (173)
- LEE, L. H. N.  
 "Inelastic Behavior of Reinforced Concrete Members Subjected to Short-Time Static Loads" (286)
- LEE, RICHARD S. M.  
 See Quade, Maurice N. (216)
- LELIAVSKY, SERGE  
 Dsc (368) of "Bank Stabilization by Revetments and Dikes" (148)
- LENHART, BURR  
 See Corradi, P. (208)
- LENZEN, K. H.  
 See Wyly, L. T. (219)
- LEONARDS, GERALD A.  
 "Strength Characteristics of Compacted Clays" (360)
- LEVY, LEON S.  
 See Cohen, Edward (333)
- LEWIS, HAROLD M.  
 Dsc (367 and 370) of "Zoning Maps for Airports" (174)
- LI, C. Y.  
 "A Concept of Slope Design of Earth Dam Embankment" (327)
- LIN, T. V.  
 See Ivy, R. J. (198)
- LINDNER, C. P.  
 "Intrusion of Sea Water in Tidal Sections of Fresh Water Streams" (358)
- LIPP, MORRIS N.  
 "Some Practical Facts about Beach Erosion in Florida" (238)
- LOFQUIST, BERTIL  
 Dsc of 160: G. E. Monfore and Edwin Rose (378)  
 Clo (378) of "Ice Pressure Against Dams: Studies of the Effects of Temperature Variation" (160)

# AUTHOR INDEX

- LOGAN, JOHN A.**  
 "Health, Welfare, and Development" (340)
- LOONEY, C. T. G.**  
 Dsc of 136: E. F. Masur, A. S. Veletsos, and William A. Conwell (D-136)  
 Clo (D-136) of "Steady-State Forced Vibration of Continuous Frames" (136)
- LUISONI, CESAR J.**  
 See Guzman, Arturo M. (D-127)
- LUMMIS, HENRY M., III**  
 See Boyer, Walter C. (165)
- MALLIS, A. GEORGE**  
 Dsc (D-128) of "Horizontally Curved Box Beams" (128)
- MALTER, HENRY**  
 Dsc (373) of "Rapid Computation of Flexural Constants" (170)
- MASUR, CHARLES L.**  
 "Pile Loading Tests, Morganza Floodway Control Structure" (324) with John A. Focht  
 See Turnbull, W. J. (192)
- MASUR, E. F.**  
 "Post-Buckling Strength of Redundant Trusses" (332)  
 Dsc (D-136) of "Steady-State Forced Vibration of Continuous Frames" (136)  
 Dsc (333) of "Earthquake Stresses in Shear Buildings" (177)
- MATEJKA, D. Q.**  
 See Benedict, P. C. (230)
- MATTESON, DeFOREST A., JR.**  
 Dsc (D-128) of "Horizontally Curved Box Beams" (128)
- MATTHEW, RAYMOND**  
 "Use of Colorado River Water in California" (347)
- MAYO, RICHARD W.**  
 See Jentoft, Arthur P. (D-125)
- MCCORMICK, ROBERT A.**  
 Dsc (D-126) of "Variation of Wind Velocity and Gusts with Height" (126)
- McFADDEN, GAYLE**  
 "The Effect of Jet Aircraft on Airport Pavements: Investigations Conducted by the Corps of Engineers" (316)
- McFADDEN, LEONARD**  
 "The Application of the Power Series Transform to Linear Difference Equations in Engineering" (225)
- McGAMMON, L. B.**  
 See Wylie, L. T. (219)
- McGAUHEY, P. H.**  
 "Stabilization of Municipal Refuse by Composting" (302) with Harold B. Gotaas
- McINDOE, GEORGE P.**  
 "Rocky Mountain Mass Concrete Operations" (268)
- McKEE, J. E.**  
 "An Analysis of Water Quality Criteria" (231) with Vinton W. Bacon  
 Dsc of 231: Edward J. Cleary (377)
- McNOWN, JOHN S.**  
 "Applications of the Relaxation Technique in Fluid Mechanics" (223) with En-Yun Hsu, and Chia-Shun Yih  
 "Mechanics of Manifold Flow" (258)  
 Dsc of 223: Fred W. Blaisdell; H. M. Paynter and R. F. Scott (374)  
 Dsc (D-123) of "Long-Period Waves or Surges in Harbors" (123)
- MENSCH, L. J.**  
 Dsc (D-129) of "Analysis of Arch Dams of Variable Thickness" (129)
- METZLER, DWIGHT F.**  
 "Planning and Executing a Uniform Pollution Abatement Program for the Kansas River Basin" (303)
- MEYER, ADOLF A.**  
 "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294)  
 Dsc of 294: C. E. Blee and George R. Rich (378)
- MEYER, ALVIN F.**  
 "Concepts of Engineering Biotechnology in Occupational Health" (352)
- MICK, KERWIN L.**  
 "Advances in Sewage Treatment in the Period from October 1, 1951 to September 1, 1952: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (248)
- MICHALOS, JAMES**  
 "Numerical Analysis of Continuous Frames in Space" (261)  
 "Numerical Analysis of Frames with Curved Girders" (250)
- MILBRADT, K. P.**  
 "Design of Monolithic Concrete Frame--Pre-stressed" (217) with T. J. Kofodimos
- MILES, PHIL M.**  
 Dsc of 151: Herbert Milwit (367)  
 Dsc (367 and 370) of "Aeronautical Charting and Mapping" (172)
- MILLER, CALLIX E., JR.**  
 See D'Appolonia, Elio (200)
- MILWIT, HERBERT**  
 Dsc (367) of "Topographic Mapping in Kentucky" (151)
- MITCHELL, STEWART**  
 See Ivy, R. J. (198)

# AUTHOR INDEX

- MONFORE, G. E.**  
Dsc of 162: Edwin Rose (378)  
Clo (378) of "Ice Pressure Against Dams: Experimental Investigations by the Bureau of Reclamation" (162)  
Dsc (378) of "Ice Pressure Against Dams: Studies of the Effects of Temperature Variation" (160)
- MORRISON, I. E.**  
"Group Loadings Applied to the Analysis of Frames" (183) by I. F. Morrison
- MORRISON, THOMAS G.**  
"Rapid Computation of Flexural Constants" (170)  
Dsc of 170: Henry Malter and Paul Rogers (373)  
Clo (373) of "Rapid Computation of Flexural Constants" (170)
- MOYER, RALPH A.**  
See Davis, Harmer E. (236)
- MOYER, STANLEY**  
"Movements in Structural Concrete at Conowingo Hydro Plant" (308) with Viggo Hansen  
Dsc of 308: H. A. Kammer and E. A. Woodhead (378)
- NEWMARK, N. M.**  
"An Engineering Approach to Blast Resistant Design" (306)  
Dsc of 306: S. J. Fraenkel (373)  
See Goodman, L. E. (349)
- NISHKIAN, B. L.**  
"Salt Water Barriers in the San Francisco Bay" (259)
- NOBLE, CHARLES M.**  
"Planning and Operating Turnpikes" (214)
- OKUN, DANIEL A.**  
"Public Health Importance of Water Supply and Waste Disposal Works" (252)
- OLANDER, HARVEY C.**  
"A Method for Calculating Stresses in Rigid Frame Corners" (249)
- OLSON, R. M.**  
Dsc (D-141) of "Effect of Entrance Conditions on Diffuser Flow" (141)
- ORMSBEE, D. W.**  
"An Interstate Route and its Urban Connections" (329)
- OWEN, W. M.**  
"Laminar to Turbulent Flow in a Wide Open Channel" (188)
- PAGON, W. WATERS**  
Dsc (D-126) of "Variation of Wind Velocity and Gusts with Height" (126)
- PALMER, L. A.**  
"Special Procedures for Pavement Design" (195)
- PARKS, WALTER J., JR.**  
"Design of Recent Additions to Key West Aqueduct" (288)
- PARMAKIAN, JOHN**  
"Pressure Surge Control at Tracy Pumping Plant" (361)
- PARME, ALFRED L.**  
Dsc (D-129) of "Analysis of Arch Dams of Variable Thickness" (129)
- PAYNTER, H. M.**  
Dsc (374) with R. F. Scott of "Applications of the Relaxation Technique in Fluid Mechanics" (223)
- PEARSE, LANGDON**  
Rt "Advances in Sewage Treatment and Present Status of the Art: Progress Report of the Committee of the Sanitary Engineering Division on Sewerage and Sewage Treatment" (176)
- PECK, RALPH B.**  
"Foundation Exploration for the Denver Coliseum" (326)
- PEEBLES, JOHN J.**  
"The Equivalent Rectangle in Prestressed Concrete" (187)
- PERAINO, JOSEPH**  
"Construction of the Elizabeth River Trench-Type Tunnel" (348)
- PERKINS, W. A.**  
Dsc of 129: Alfred L. Parme, L. J. Mensch, Fairfax D. Kirn and Gurmukh S. Sarkaria, A. C. Josephs, and George E. Goodall (D-129)  
Clo (D-129) of "Analysis of Arch Dams of Variable Thickness" (129)
- PETERSEN, JACK S.**  
"Effect of Well Screens on Flow into Wells" (365) with Carl Rohwer and M. L. Albertson
- PILLSBURY, A. F.**  
See Taylor, E. H. (369)
- PITTMAN, HARRISON V.**  
Dsc (368) of "Bank Stabilization by Revetments and Dikes" (148)
- PLETTA, D. H.**  
"Experimental Analysis" (224) with D. Frederick
- POGGI, BRUNO**  
Dsc (374) of "The Application of Heaviside's Step-Function to Beam Problems" (202)
- POLATTY, JAMES M.**  
"Earth Overflow Dike, Jim Woodruff Dam" (222)
- PROKOSCH, WALTER**  
"Airport Traffic and the Puerto Rico International Airport" (255)
- PROUTY, E. N.**  
Dsc (D-121) of "Rate of Change of Grade Per Station" (121)
- QUADE, MAURICE N.**  
"Special Design Features of the Yorktown Bridge" (168)

# AUTHOR INDEX

- QUADE, MAURICE N.  
"The John E. Mathews Bridge" (216) with Richard S. M. Lee
- QUINONES, MIQUEL A.  
"High Intensity Rainfall and Major Floods in Puerto Rico" (364)
- RAAB, N. C.  
See Ivy, R. J. (198)
- RADER, EARLE M.  
"Development of Miami International Airport" (359)
- RANKIN, R. S.  
"Performance of Biofiltration Plants by Three Methods" (336)
- RAPHAEL, J. M.  
Dsc of 117: Ross M. Riegel, Roy W. Carlson, J. Laginha Serafim, A. D. Ross, J. A. Hanson, and A. Warren Simonds (D-117)  
Clo (D-117) of "The Development of Stresses in Shasta Dam" (117)
- REID, WILLIAM  
"Unified Mass-Transportation System for New York" (171)
- RICH, GEORGE R.  
Dsc (378) of "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294)
- RICHARDS, WILLIAM H.  
"Cadastral Surveys in the United States" (282)
- RICHART, F. E., JR.  
See Curtis, Allen J. (211)
- RICHEY, V. J.  
See Ivy, R. J. (198)
- RIEGEL, ROSS M.  
Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- RIESBOL, HERBERT S.  
"Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- RILEY, RUSSELL H.  
"City Planning Techniques" (194)  
"Community and Neighborhood Development" (285)
- ROBERTSON, J. M.  
Dsc of 141: Steponas Kolupaila, Arthur L. Collins, and R. M. Olson (D-141)  
Clo (D-141) with Donald Ross of "Effect of Entrance Conditions on Diffuser Flow" (141)
- ROGERS, PAUL  
Dsc (373) of "Rapid Computation of Flexural Constants" (170)
- ROHWER, CARL  
See Petersen, Jack S. (365)
- ROOT, A. W.  
"California Experience in Correction of Landslides and Slipouts" (235)
- RORABAUGH, MATTHEW  
"Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362)  
Dsc (371) of "Analysis of Ground-Water Lowering Adjacent to Open Water" (106)
- ROSE, EDWIN  
Dsc (378) of "Ice Pressure Against Dams: Experimental Investigations by the Bureau of Reclamation" (162)  
Dsc (378) of "Ice Pressure Against Dams: Studies of the Effects of Temperature Variation" (160)
- ROSENBLUETH, E.  
See Goodman, L. E. (349)
- ROSS, A. D.  
Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- ROSS, DONALD  
See Robertson, J. M. (D-141)
- ROWE, P. W.  
Dsc (368) of "The Design of Flexible Bulkheads" (166)
- ROWE, ROBERT S.  
"The Amplification of Stress in Flexible Steel Arches" (245)  
Dsc of 245: Milo S. Ketchum (373)
- RYDER, FREDERICK L.  
"Electrical Analogs of Statically Loaded Structures" (376)
- SAFFIR, HERBERT S.  
"The Effects on Structures of Winds of Hurricane Force" (206)
- SALVADORI, MARIO G.  
"Earthquake Stresses in Shear Buildings" (177)  
"Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291)  
"Stresses and Displacements in Thin Shells Composed of Cylindrical and Spherical Segments" (293)  
Dsc of 177: John A. Blume; E. F. Masur; and Edward Cohen, Edward Laing, and Leon S. Levy (333)  
Clo (333) of "Earthquake Stresses in Shear Buildings" (177)  
See Bleich, H. H. (287)
- SANDERS, A. L. R.  
Dsc of 150: W. H. Jameson and J. Sorkin (372 and 373)  
Clo (372 and 373) of "East St. Louis Veterans Memorial Bridge" (150)
- SANDRETTO, P. C.  
Dsc (367 and 370) of "Electronic Devices in Air Transport" (173)
- SARKARIA, GURMUKH S.  
See Kirn, Fairfax D. (D-129)

# AUTHOR INDEX

- SAUNDERS, HERBERT  
Dsc (374) of "The Application of Heaviside's Step-Function to Beam Problems" (202)
- SCHANCK, CHARLES A.  
"Aeronautical Charting and Mapping" (172)  
Dsc of 172: E. S. Fabian and Phil M. Miles (367 and 370)  
Clo (367 and 370) of "Aeronautical Charting and Mapping" (172)
- SCHEFFEY, C. F.  
See Ivy, R. J. (198)  
See Clough, Ray W. (246)
- SCHMERTMANN, JOHN H.  
"Estimating the True Consolidation Behavior of Clay from Laboratory Test Results" (311)
- SCHULL, HERMAN W., JR.  
"Conservation of the Everglades" (242)
- SCOTT, R. F.  
See Paynter, H. M. (374)
- SERAFIM, J. LAGINHA  
Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- SHEA, PAUL H.  
"Unusual Foundation Conditions Encountered on the Central and Southern Florida Project" (227)
- SHEPPARD, LYLE R.  
Dsc (377) of "Underground Corrosion of Piping" (130)
- SHERLOCK, R. H.  
Dsc of 126: W. Watters Pagon; Irving A. Singer and Maynard E. Smith; Percy H. Thomas and M. H. Fresen; Robert A. McCormick and Edward Cohen (D-126)  
Clo (D-126) of "Variation of Wind Velocity and Gusts with Height" (126)
- SHERMAN, JOHN  
"Analysis of Continuous Composite Steel and Concrete Beams" (251)
- SHOCKLEY, W. G.  
See Johnson, S. J. (363)
- SIMMONS, LANSING G.  
"California Under Control" (278)
- SIMONDS, A. WARREN  
Dsc (D-117) of "The Development of Stresses in Shasta Dam" (117)
- SINGER, IRVING A.  
Dsc (D-126) with Maynard E. Smith of "Variation of Wind Velocity with Height" (126)
- SMITH, DAVID B.  
"Current Research in Sanitary Engineering at the University of Florida" (207)  
"Frequency of Excessive Rainfalls in Florida" (366)
- SMITH, MAYNARD E.  
See Singer, Irving A. (D-126)
- SMUTZ, HUBER EARL  
Dsc of 138: Henry Horowitz (D-138)  
Clo (D-138) of "The Value and Administration of a Zoning Plan" (138)
- SNODGRASS, GEORGE F.  
"Selection of Pumps and Design of High Volume--Low Head Pumping Stations" (229)
- SORKIN, JOSEPH  
Dsc (372 and 373) of "East St. Louis Veterans Memorial Bridge" (150)
- STELZRIEDE, M. E.  
Dsc (D-122) of "Engineering Aspects of Diffraction and Refraction" (122)
- STEVENS, LEONARD K.  
Dsc (333) of "Stiffness Charts for Gusseted Members Under Axial Load" (179)
- STEWART, R. C.  
"Trafficability of Soil as Related to Mobility of Vehicles" (328) with S. J. Weiss
- STOKES, R. C.  
See Ayers, James R. (166)
- STOUT, G. E.  
See Hudson, H. E., Jr. (178)
- STRAUB, LORENZ G.  
"Velocity Measurements of Air-Water Mixtures" (193) with John M. Killen and Owen P. Lamb
- SUTHERLAND, ROBERT A.  
"Statistical Review of Dam Construction" (355)
- TAYLOR, E. H.  
"Unsteady Flow in Open Type Pipe Irrigation Systems" (369) with A. F. Pillsbury, T. O. Ellis, and G. A. Bekey
- TERZAGHI, KARL  
"Anchored Bulkheads" (262)
- THOMAS, PERCY H.  
Dsc (D-126) with M. H. Fresen of "Variation of Wind Velocity with Height" (126)
- TIMBY, ELMER K.  
"Bridges on West Virginia Turnpike" (263)
- TOCH, ARTHUR  
"Discharge Characteristics of Tainter Gates" (295)
- TOLER, JACK S.  
"Offshore Petroleum Installation" (289)
- TSCHEBOTARIOFF, GREGORY P.  
Dsc (368) of "The Design of Flexible Bulkheads" (166)
- TURNBULL, W. J.  
"Relief Well Systems for Dams and Levees" (192) with C. I. Mansur
- TURRE, GEORGE J.  
"Algae Responsible for Odor and Taste in Public Water Supplies" (267)

# AUTHOR INDEX

- TSAO, C. H.  
See Grinter, L. E. (298)
- van LANGENDONCK, TELEMACHO  
Dsc (333) of "The Application of Heaviside's Step-Function to Beam Problems" (202)
- van VEEN, J.  
Dsc (D-134) of "Solution of an Hydraulic Problem by Analog Computer" (134)
- VELETOS, A. S.  
Dsc (D-136) of "Steady-State Forced Vibration of Continuous Frames" (136)
- VOLTERRA, ENRICO  
"Bending of a Constrained Circular Beam Resting on an Elastic Foundation" (205) with Randall Chung  
"Deflections of a Circular Beam out of its Initial Plane" (375)
- WAKEMAN, A. G.  
"The Development of the Pulp and Paper Industry in the South" (356)
- WALSH, O. E.  
"Slackwater Improvement of the Columbia River" (181)
- WARE, THOMAS M.  
See D'Appolonia, Ello (200)
- WEIGHT, WILLIAM K.  
See Derby, Ray L. (272)
- WEISS, S. J.  
See Stewart, R. C. (328)
- WENK, EDWARD, JR.  
Dsc of 157: John C. Burgess (374)  
Clo (374) of "Radial Impact on an Elastically Supported Ring" (157)
- WHITLOCK, ERNEST W.  
Rt "Water Supply Engineering: Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1951" (184)
- WILLSON, R. J.  
"Construction of Granby Pumping Plant" (270)
- WILSEY, EDWARD F.  
"Friction Factors for Turbulent Flow in Pipes" (197)
- WILSON, B. W.  
Dsc (D-123) of "Long-Period Waves or Surges in Harbors" (123)
- WINTER, GEORGE  
See Bijlaard, P. P. (292)  
See Chow, Li (D-127)
- WOLF, W. H.  
See Judd, W. R. (269)
- WOODHEAD, E. A.  
Dsc (378) of "Movements in the Structural Concrete at Conowingo Hydro Plant" (308)
- WYLY, L. T.  
"Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219) with R. W. Kluge, K. H. Lenzen, L. B. McGammon, M. B. Lagaard, and E. W. Larson, Jr.
- YANG, NAI C.  
Dsc (368) of "The Design of Flexible Bulkheads" (166)
- YIH, CHIA-SHUN  
See McNown, John S. (223)



---

# AMERICAN SOCIETY OF CIVIL ENGINEERS

Founded November 5, 1852

---

## ANNUAL INDEX

---

Subject and Author Indexes

for

PROCEEDINGS

Volume 80 (1954)

Items indexed are identified by months, as follows:

Month

January  
February  
March  
April  
May  
June  
July  
August  
September  
October  
November  
December

Number

Proceedings-Separates 379 to 397.  
398 to 413.  
414 to 427.  
428 to 434.  
435 to 443.  
444 to 456.  
457 to 465.  
466 to 483.  
484 to 511.  
512 to 533.  
534 to 557.  
558 to 582.

---

### SUBJECT INDEX

---

#### AIR TRANSPORT

- \*Airfield Pavement Design of the Corps of Engineers" (458) by Gayle McFadden
- \*Airport Terminal Building Design" (421) by H. Orville Varty
- \*Airports and Aviation in Latin America" (394) by Kenneth E. Calender
- \*Base Course and Bituminous Pavement Requirements" (424) by W. J. Turnbull and O. B. Ray
- \*Development of an International Airport" (406) by Earle M. Rader
- Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163) See Johannessen, W.
- Dsc (459) of "Recent Airport Design and Development" (196) See Hahn, P. A.
- Dsc (459) of "The Engineer's Role in Metropolitan Traffic Planning" (191) See Braff, L.
- Dsc (523) of "Jet Transport Economics--Influence on Airport and Airway" (241) See Borger, J. G.
- \*Planning and Engineering of U. S. Air Force Bases" (457) by Lee B. Washbourne
- \*Planning of Air Force Bases" (402) by Paul C. Brown
- \*Planning an Airport" (410) by Paul H. Stafford
- \*Planning of the Modern Air Base" (403) by Paul J. Houfek
- \*Testing for Construction and Evaluation of Airport Pavements" (418) by Clifford J. Chunn and Frank M. Bell

#### ALASKA

- \*Foundation Problems of the Eklutna Project" (444) by William R. Judd

#### ARKANSAS

- \*Irrigation Potentialities in Arkansas" (404) by Paul H. Berg

#### ATOMIC ENERGY

- \*An Approach to Hot Laboratory Design" (448) by Gibson Morris
- \*An Engineering Approach to Hot Cell Design" (446) by H. M. Glen
- \*Shielding Structure Facilities for Atomic Energy Research" (447) by Frank Ring, Jr.
- \*Treatment and Disposal of Atomic Energy Industry Wastes" (422) by Joseph A. Lieberman and Arthur E. Gorman

#### BEAMS

- \*Beam Restraints Provided by Walls with Openings" (529) by I. A. Mohammed and E. P. Popov
- \*Buckling in the Elasto-Plastic Range" (531) by Vincenzo Franciosi
- \*Continuous Deep Beams" (450) by David H. Cheng and Ming-Lung Pei
- \*Lateral Buckling of Cantilevered I-Beams under Uniform Loads" (527) by Stanley Poley
- \*Non-Uniform Torsion of Plate Girders" (449) by Gerald G. Kubo, Bruce G. Johnston, and William J. Eney

## SUBJECT INDEX

### BEAMS

- "Unsymmetrical Concrete Beam Loaded in Two Directions" (579) by W. D. Bigler

### BOLTS

- "Slip of Joints Under Static Loads" (484) by R. A. Hechtman, R. D. Young, A. G. Chin, and E. R. Savikko
- "Structural Application of High-Strength Bolts" (485) by T. R. Higgins and E. J. Ruble

### BRIDGES

- "An Influence Line Analysis for Suspension Bridges" (558) by David J. Peery
- "Design of the Chesapeake Bay Bridge" (543) by R. A. Gilmore
- "Mackinac Straits Bridge" (559) by D. B. Steinman
- "Moments and Deflections in Steel Grid Bridge Floors" (562) by H. J. Greenberg

### CANADA

- "Studies of Bearpaw Shale at a Damsite in Saskatchewan" (476) by Robert Peterson

### CHANNELS

- "A New Concept of Flow in Rough Conduits" (390) by Henry N. Morris
- "Backwater Effects of Open Channel Constrictions" (413) by H. J. Tracy and R. W. Carter
- "Flow in Open Channels" (466) by Edward F. Wilsey
- "Open Channels with Nonuniform Discharge" (381) by Wen-Hsiung Li
- "Tranquil Flow Through Open-Channel Constrictions" (467) by Carl E. Kindsvater and Roland W. Carter

### CITY PLANNING

- "A Steel Plant's Effect on Regional Planning and Development" (507) by Russell VanNest Black
- Dsc (436) of "The Allegheny Conference--Planning in Action" (131) See Martin, Park H.
- Dsc (436) of "Unified Mass-Transportation System for New York" (171) See Reid, William
- Dsc (487) of "Recent Airport Design and Development" (196) See Hahn, Philip A.
- Dsc (487) of "The Engineer's Role in Metropolitan Traffic Planning" (191) See Braff, Lloyd
- "History of the City Planning Division of the ASCE" (509) by Harry W. Alexander
- "Is Parking a Public Responsibility?" (510) by William R. B. Froehlich
- "Philadelphia Capital Budget and Program Procedures" (508) by Charles A. Howland
- "Solving the Engineering Problems of Metropolitan Areas" (511) by G. H. Herrold
- "The Training of City Planners" (423) by Howard K. Menhinick

### CONSERVATION

- "Twin Opportunities: Conservation and Engineering" (419) by Clarence Cottam

### CONSTRUCTION

- Clo (506) of "Development of the Chemical and Allied Industry in the South" (226) See Hoyer, C. O.
- "Improving the Load Carrying Capacities of Subgrades" (505) by Charles M. Noble

- "The Function of the Laboratory in Engineering Construction" (400) by George H. Nelson

### DAMS

- "Diversion Flow Through Buford Dam Conduits" (535) by Francis F. Escoffier
- "Morning-Glory Shaft Spillways: Determination of Pressure-Controlled Profiles" (432) by W. E. Wagner
- "Morning-Glory Shaft Spillways: Performance Tests on Prototype and Model" (433) by A. J. Peterka
- "Morning-Glory Shaft Spillways: Prototype Behavior" (431) by J. N. Bradley
- "Rock-Fill Dam Design and Construction Problems" (514) by D. J. Bleifuss and James P. Hawke

### DRAINAGE

- "Diversion of Canals" (461) by Hassan M. Ismail
- "Drainage in the Humid Areas of the United States" (460) by John G. Sutton

### ECONOMICS

- "Capitalizing on Municipal Wastes by Composting" (545) by Richard P. Stovroff
- "Flood Insurance" (483) by H. Alden Foster
- "Philadelphia Capital Budget and Program Procedures" (508) by Charles A. Howland
- "Recent Pennsylvania Experiences of Authority Sewage Works Financing" (453) by Samuel I. Zack
- Rt "State Activities and Fiscal Aspects: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (557) Henry W. Taylor, Chmn
- "The Economics of Paralleling Pipe" (537) by George A. Whetstone

### FLORIDA

- "Design Rainfall: Central and Southern Florida Project" (519) by L. A. Farrer
- "Hydrology Characteristics: Central and Southern Florida Project" (520) by Angelo Tabita
- "Water Control in Central and Southern Florida" (521) by Harold A. Scott

### FOUNDATIONS

- Clo (553) of "Building Foundations in San Francisco" (325) See Lee, Charles H.
- Dsc (518) of "Building Foundations in San Francisco" (325) See Lee, Charles H.
- Dsc (572) of "Anchored Bulkheads" (262) See Terzaghi, Karl
- "Fill Utilization for Building Foundations" (417) by Gordon B. Dalrymple
- "Foundation Conditions in the Cuyahoga River Valley" (513) by Ralph B. Peck
- "Foundation Failures in Residences and Small Structures" (561) by Karl V. Taylor
- "Foundation Problems of Kerr No. 3 Hydro Plant" (533) by H. H. Cochrane and R. A. Sutherland
- "Foundation Problems of the Eklutna Project" (444) by William R. Judd
- "Foundation Treatment for Earth Dams on Rock" (548) by Thomas F. Thompson
- "Modern Procedures for Underground Investigations" (435) by George F. Sowers
- "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386) by K. P. Karpoft

# SUBJECT INDEX

## FOUNDATIONS

- \*Pile Foundations for Buildings" (385) by John W. Dunham
- \*Safe Loads on Dog-Leg Piles" (475) by James D. Parsons and Stanley D. Wilson
- "Sand Drain Applications by the Port of New York Authority" (456) by John M. Kyle and Martin S. Kapp
- \*Some Applications of Geology in Soil Mechanics and Foundation Engineering" (447) by Parker D. Trask and H. B. Seed

## GEOLOGY

- "Soil and Geologic Features of the Buford Project" (425) by William V. Conn
- \*Some Applications of Geology in Soil Mechanics and Foundation Engineering" (447) by Parker D. Trask and H. B. Seed

## GEORGIA

- "Diversion Flow Through Buford Dam Conduits" (535) by Francis F. Escoffier
- "Georgia's Proposed Plat Law" (408) by C. R. Roberts
- "Soil and Geologic Features of the Buford Project" (425) by William V. Conn
- "Subgrade Soil Classification System Used in Georgia" (512) by L. W. Freeman
- "The Mapping of Buford Reservoir" (415) by F. C. Riley

## HIGHWAYS

- Clo (501) of "A Mathematical Examination of Spiraled Compound Curves" (357) See Hickerson, T. F.
- Clo (501) of "Highway Bridges on Deep Foundations" (276) See Duclos, Louis
- Dsc (501) of "Analysis of Corrective Actions for Highway Landslides" (190) See Baker, R. F.
- Dsc (501) of "Vertical Sand Drains for Stabilization of Muck-Peat Soils" (351) See Carpenter, J. C.
- \*Expedient Geometry for the Design of Compound Highway Curves with Connection Spirals" (500) by Robert D. Schacherl and George J. Berindoague
- "Improving the Load Carrying Capacities of Subgrades" (505) by Charles M. Noble
- "Is Parking a Public Responsibility?" (510) by William R. B. Froehlich
- \*Performance of Soils Versus Chemical Properties" (499) by C. Kinney Hancock

## HYDRAULICS

- \*A New Concept of Flow in Rough Conduits" (390) by Henry M. Morris
- "An Experimental Study of Bubbles Moving in Liquids" (387) by W. L. Haberman and R. K. Morton
- "Backwater Effects of Open Channel Constrictions" (413) by H. J. Tracy and R. W. Carter
- "Backwater Functions by Numerical Integration" (383) by Clint J. Keifer and Henry Hsien Chu
- Clo (538) of "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362) See Rorabaugh, M. L.
- Clo (538) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354) See Blaisdell, Fred W.
- Clo (538) of "Total Sediment Load Measured in Turbulence Flume" (230) See Benedict, P. C.

- Dsc (384) of "Characteristics of Fixed-Dispersion Cone Valves" (153) See Elder, Rex A.
- Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175) See Gumensky, D. B.
- Dsc (384) of "Rating Curves for Flow over Drum Gates" (169) See Bradley, Joseph N.
- Dsc (428) of "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146) See Paynter, Henry M.
- Dsc (428) of "Nonlinear Electrical Analogy for Pipe Networks" (139) See McIlroy, Malcolm S.
- Dsc (428) of "Rainfall Studies Using Rain-Gage Networks and Radar" (178) See Hudson, H. E., Jr.
- Dsc (437) of "A Direct Step Method for Computing Water-Surface Profiles" (180) See Ezra, Arthur A.
- Dsc (437) of "Dam Modifications Checked by Hydraulic Models" (184) See Harrison, E. S.
- Dsc (437) of "Settling Rates of Suspensions in Solids Contact Units" (186) See Kalinske, A. A.
- Dsc (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189) See Riesbol, Herbert S.
- Dsc (479) of "High Velocity Tests in a Penstock" (297) See Burke, Maxwell F.
- Dsc (479) of "Laminar to Turbulent Flow in a Wide Open Channel" (188) See Owen, W. M.
- Dsc (479) of "River-Bed Scour During Floods" (254) See Lane, E. W.
- Dsc (491) of "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362) See Rorabaugh, M. L.
- Dsc (491) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354) See Blaisdell, Fred W.
- Dsc (491) of "Pressure Surge Control at Tracy Pumping Plant" (361) See Parmakian, John
- Dsc (538) of "Analysis of Water Hammer by Characteristics" (274) See Gray, C. A. M.
- Dsc (538) of "Friction Factors for Turbulent Flow in Pipes" (197) See Wilsey, Edward F.
- "Diversion Flow Through Buford Dam Conduits" (535) by Francis F. Escoffier
- "Equation of the Free-Falling Nappe" (482) by Fred W. Blaisdell
- "Estimation of Flood Probabilities" (438) by Leo R. Beard
- "Flood Insurance" (483) by H. Alden Foster
- "Flow Expansion and Pressure Recovery in Fluids" (567) by Harold Tufts
- "Flow in Open Channels" (466) by Edward F. Wilsey
- "Ground Water in the Vermilion River Basin, Louisiana" (490) by Paul H. Jones
- "Hydraulic Model Studies of Martin Dam Draft Tubes" (382) by Carl E. Kindsvater and R. R. Randolph, Jr.
- "Hydraulics of the Free Overfall" (564) by A. Fathy and Mahmoud Shaarawi Amin
- "Interaction Between Well and Aquifer" (578) by Wen-Hsiung Li
- "Master Library List of Fluid Mechanics and Hydraulic Engineering Titles" (380) by Carl E. Kindsvater, Chmn
- "Morning-Glory Shaft Spillways: Determination of Pressure-Controlled Profiles" (432) by W. E. Wagner
- "Morning-Glory Shaft Spillways: Performance Tests on Prototype and Model" (433) by A. J. Peterka
- "Morning-Glory Shaft Spillways: Prototype Behavior" (431) by J. N. Bradley

## SUBJECT INDEX

### HYDRAULICS

- \*Open Channels with Nonuniform Discharge" (381) by Wen-Hsiung Li
- \*Recent Trends in Hydraulic Gate Design" (517) by D. A. Buzzell
- \*Similarity of Distorted River Models with Movable Bed" (566) by H. A. Einstein and Ning Chien
- \*Statistical Theory of Droughts" (439) by E. J. Gumbel
- \*Surface-Water Supply for Irrigation in the Vermillion River Basin, Louisiana" (489) by E. L. Hendricks
- \*The Box Inlet Drop Spillway and Its Outlet" (534) by Fred W. Blaisdell and Charles A. Donnelly
- \*The Economics of Paralleling Pipe" (537) by George A. Whetstone
- \*The Log-Probability Law and its Engineering Applications" (536) by Ven Te Chow
- \*The Present Status of Research on Sediment Transport" (565) by Ning Chien
- \*Tranquil Flow Through Open-Channel Constrictions" (467) by Carl E. Kinsvater and Rolland W. Carter
- \*Verification of Theory for Oblique Standing Waves" (526) by Arthur T. Ippen and Donald R. F. Harleman

### HYDROLOGY

- \*Artificial Precipitation Control" (547) by Ray K. Linsley
- \*Design Rainfall: Central and Southern Florida Project" (519) by L. A. Farrer
- \*Estimation of Flood Probabilities" (438) by Leo R. Beard
- \*Hydrology Characteristics: Central and Southern Florida Project" (520) by Angelo Tabita
- \*Statistical Theory of Droughts" (439) by E. J. Gumbel

### IRRIGATION

- Clo (522) of "Unsteady Flow in Open Type Pipe Irrigation Systems" (369) See Taylor, E. H.
- \*Design Rainfall: Central and Southern Florida Project" (519) by L. A. Farrer
- Dsc (391) of "Irrigation Water Rights in the Humid Areas" (140) See Critchlow, Howard T.
- Dsc (391) of "Rice Irrigation in Louisiana" (156) See Shutts, E. E.
- Dsc (391) of "Unconfined Ground Water Flow to Multiple Wells" (142) See Hansen, Vaughn E.
- Dsc (463) of "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319) See Huberty, M. R.
- Dsc (463) of "Unsteady Flow in Open Type Pipe Irrigation Systems" (369) See Taylor, E. H.
- Dsc (463) of "Use of Colorado River Water in California" (347) See Matthew, Raymond
- Dsc (522) of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280) See Lane, E. W.
- \*Economic Effect of Irrigation in a Subhumid Area" (398) by Willis C. Boegli
- \*Factors Influencing Irrigation in Humid Areas" (462) by Tyler H. Quackenbush
- \*Ground Water in the Vermillion River Basin, Louisiana" (490) by Paul H. Jones
- \*Humid Area Soils and Moisture Factors for Irrigation Design" (426) by Fred H. Larson

- \*Hydrology Characteristics: Central and Southern Florida Project" (520) by Angelo Tabita
- \*Irrigation Potentialities in Arkansas" (404) by Paul H. Berg
- \*Surface-Water Supply for Irrigation in the Vermillion River Basin, Louisiana" (489) by E. L. Hendricks
- \*Water Control in Central and Southern Florida" (521) by Harold A. Scott

### JOINTS

- \*Comparative Behavior of Bolted and Riveted Joints" (470) by Frank Baron and Edward W. Larson, Jr.
- \*Fatigue in Riveted and Bolted Single Lap Joints" (469) by J. W. Carter, K. H. Lenzen, and L. T. Wylly
- \*Laboratory Tests of High Tensile Bolted Structural Joints" (441) by W. H. Munse, D. T. Wright, and N. M. Newmark
- \*The Work of the Research Council on Riveted and Bolted Joints" (440) by W. C. Stewart

### LABORATORIES

- \*The Function of the Laboratory in Engineering Construction" (400) by George H. Nelson

### LATIN AMERICA

- \*Airports and Aviation in Latin America" (394) by Kenneth E. Calender

### LEGAL TOPICS

- \*Georgia's Proposed Plat Law" (408) by C. R. Roberts

### LOUISIANA

- \*Ground Water in the Vermillion River Basin, Louisiana" (490) by Paul H. Jones
- \*Surface-Water Supply for Irrigation in the Vermillion River Basin, Louisiana" (489) by E. L. Hendricks

### MAPPING

- \*A Modern Military Grid System" (524) by Floyd W. Hough
- Clo (525) of "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305) See Beavin, Benjamin Everett, Sr.
- Dsc (389) of "A Proposed Method for the Transit Lining of High-Speed Track" (271) See Berndt, Neil R.
- Dsc (389) of "Methods for Making Highway Soil Surveys" (152) See Woods, K. B.
- Dsc (389) of "Surveys and Maps--Vital to the Problems of Mass Transportation" (305) See Beavin, Benjamin Everett, Sr.
- Dsc (525) of "Cooperative Topographic Mapping in California" (277) See Ecklund, Conrad A.
- \*Photogrammetry Aids the Pennsylvania Turnpike" (577) by G. B. Gilbert
- \*Photogrammetry and its Application" (581) by Alfred O. Quinn
- \*Photogrammetry in City Planning and Operations" (574) by Louis A. Woodward
- \*Surveys and Maps for Pipelines" (393) by George E. MacDonald
- \*The Mapping of Buford Reservoir" (415) by F. C. Riley

## SUBJECT INDEX

### MECHANICS

- "An Experimental Study of Bubbles Moving in Liquids" (387) by W. L. Haberman and R. K. Morton
- "Analog Computers Applied to Elastic-Plastic Systems" (528) by Leo Schenker and Gunther Martin
- "Beam Restraints Provided by Walls with Openings" (529) by I. A. Mohammed and E. P. Popov
- "Buckling in the Elasto-Plastic Range" (531) by Vincenzo Franciosi
- Clo (530) of "Applications of the Relaxation Technique in Fluid Mechanics" (223) See McNown, John S.
- Clo (530) of "Impulsive Motion of Elasto-Plastic Beams" (287) See Bleich, H. H.
- Clo (530) of "Inelastic Behavior of Reinforced Concrete Members Subjected to Short-Time Static Loads" (286) See Lee, L. H. N.
- Clo (530) of "Mechanics of Manifold Flow" (258) See McNown, John S.
- Clo (530) of "Numerical Analysis of Frames with Curved Girders" (250) See Michalos, James
- Dsc (396) of "Applications of the Relaxation Technique in Fluid Mechanics" (223) See McNown, John S.
- Dsc (396) of "Mechanics of Manifold Flow" (258) See McNown, John S.
- Dsc (396) of "Numerical Analysis of Frames with Curved Girders" (250) See Michalos, James
- Dsc (396) of "The Non-Elastic Behavior of Bridges Under Impulsive Loads" (185) See Fraenke, S. J.
- Dsc (429) of "Designing Aluminum Alloy Members for Combined End Load and Bending" (300) See Hill, H. N.
- Dsc (429) of "Impulsive Motion of Elasto-Plastic Beams" (287) See Bleich, H. H.
- Dsc (429) of "Inelastic Behaviour of Reinforced Concrete Members Subjected to Short Time Static Loads" (286) See Lee, L. H. N.
- Dsc (429) of "The Application of Heaviside's Step-Function to Beam Problems" (202) See Goldberg, John E.
- Dsc (530) of "Plates with Boundary Conditions of Elastic Support" (199) See Fuchs, S. J.
- Dsc (532) of "Plastic Deformation of Wide-Flange Beam Columns" (330) See Ketter, Robert L.
- Dsc (532) of "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292) See Bijlaard, P. P.
- "Lateral Buckling of Cantilevered I-Beams under Uniform Loads" (527) by Stanley Poley
- "Verification of Theory for Oblique Standing Waves" (526) by Arthur T. Ippen and Donald R. F. Harleman

### NEW JERSEY

- "Use of Delaware River Water Through the Delaware and Raritan Canal" (452) by Howard W. Acken and Robert L. Hardman

### NEW YORK

- "New York's Extension of Its Sources to the Delaware" (454) by Karl R. Kennison
- "Sand Drain Applications by the Port of New York Authority" (456) by John M. Kyle and Martin S. Kapp

### OHIO

- "Drainage in the Humid Areas of the United States" (460) by John G. Sutton

### OKLAHOMA

- "Economic Effect of Irrigation in a Subhumid Area" (398) by Willis C. Boegli

### PAVEMENTS

- "Base Course and Bituminous Pavement Requirements" (424) by W. J. Turnbull and O. B. Ray
- "Testing for Construction and Evaluation of Airport Pavements" (418) by Clifford J. Chunn and Frank M. Bell

### PENNSYLVANIA

- "Philadelphia Capital Budget and Program Procedures" (508) by Charles A. Howland
- "Recent Pennsylvania Experiences of Authority Sewage Works Financing" (453) by Samuel I. Zack

### PIPELINES

- "The Economics of Paralleling Pipe" (537) by George A. Whetstone

### POLLUTION

- "Effect of Cabin Cruiser Waste Discharge on a Small Harbor" (455) by William T. Ingram and Alexander Diachishin
- "Sanitary Engineering Aspects of Atmospheric Pollution" (392) by Louis C. McCabe

### POWER

- "Civil Engineering Features of Delta Steam Electric Station" (405) by George E. Archibald
- "Coal-Handling Design for TVA Steam Plants" (412) by George P. Palo
- Dsc (465) of "Charts for Designing Air Chambers for Pump Discharge Lines" (273) See Evans, W. E.
- Dsc (465) of "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294) See Meyer, Adolf A.
- "Foundation Problems of Kerr No. 3 Hydro Plant" (533) by H. H. Cochrane and R. A. Sutherland
- "Hydraulic Model Studies of Martin Dam Draft Tubes" (382) by Carl E. Kindsvater and R. R. Randolph, Jr.
- "Prospective Sites for Large Steam Plants" (464) by Norman F. Williams
- "Recent Trends in Hydraulic Gate Design" (517) by D. A. Buzzell

### REPORTS

- "Composting and Grinding" (556) Henry F. Soehngen, Chmn
- "Dumping and Land Fill: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (474) Henry W. Taylor, Chmn
- "Garbage Reduction: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (498) Henry W. Taylor, Chmn
- "Hog Feeding: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (496) Henry W. Taylor, Chmn



## SUBJECT INDEX

### REPORTS

- "Incineration: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (497) Henry W. Taylor, Chmn
- "Master Library List of Fluid Mechanics and Hydraulic Engineering Titles" (380) Carl E. Kindsvater, Chmn
- "Refuse Collection: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (473) Henry W. Taylor, Chmn
- "Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1953" (388) Ernest W. Whitlock, Chmn
- "State Activities and Fiscal Aspects: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (557) Henry W. Taylor, Chmn

### RESERVOIRS

- "Aerial Surveys for Reservoir Planning" (407) by Francis J. Guscio
- "Reservoir Malaria Control and Sanitation Problems" (399) by Frank B. Wood
- "The Mapping of Buford Reservoir" (415) by F. C. Riley

### RIVERS

- "Development of the Delaware River for Commerce" (503) by B. B. Talley
- "Engineering Problems in Columbia Basin Varved Clay" (515) by Fred C. Walker and W. H. Irwin
- "Navigation on the Warrior-Tombigbee River System" (414) by Ralph W. Mueller
- "Pollution of the Mississippi River near New Orleans" (552) by Frank W. Macdonald
- "Similarity of Distorted River Models with Movable Bed" (566) by H. A. Einstein and Ning Chien
- "Use of Delaware River Water Through the Delaware and Raritan Canal" (452) by Howard W. Acken and Robert L. Hardman

### SANITARY ENGINEERING

- "Artificial Precipitation Control" (547) by Ray K. Linsley
- "Capitalizing on Municipal Wastes by Composting" (545) by Richard P. Stovroff
- "Concentration of Combined Primary and Activated Sludges in Separate Thickening Tanks" (443) by Wilbur N. Torpey
- "Control and Disposal of Kraft Mill Effluents" (420) by W. A. Moggio
- "Cooperation Between Industries and Regulatory Agencies" (554) by John E. Kinney
- Dsc (395) of "An Analysis of Water Quality Criteria" (231) See McKee, J. E.
- Dsc (395) of "Sewage Disposal in Tidal Estuaries" (167) See Diachishin, Alexander N.
- Dsc (481) of "An Analysis of Water Quality Criteria" (231) See McKee, J. E.
- Dsc (481) of "Performance of Biofiltration Plants by Three Methods" (336) See Rankin, N. S.
- Dsc (481) of "Sewage Aeration Practice in New York City" (307) See Gould, Richard H.
- Dsc (481) of "Stabilization of Municipal Refuse by Composting" (302)
- Dsc (481) of "The Key West Aqueduct" (208)

- "Effect of Cabin Cruiser Waste Discharge on a Small Harbor" (455) by William T. Ingram and Alexander Diachishin
- "Incineration and Alternative Refuse Disposal Processes" (471) by Ralph Stone and F. R. Bowerman
- "Industrial Waste Process Design" (411) by W. Wesley Eckenfelder, Jr., and Donald J. O'Connor
- "Infiltration Galleries" (472) by Ralph Stone
- "Interrelation of Stream Regulation and Stream Pollution" (546) by Charles M. Davidson and Milo A. Churchill
- "National Water Supply" (442) by Thorndike Saville
- "New York's Extension of Its Sources to the Delaware" (454) by Karl R. Kennison
- "Pollution of the Mississippi River near New Orleans" (552) by Frank W. Macdonald
- "Recent Pennsylvania Experiences of Authority Sewage Works Financing" (453) by Samuel I. Zack
- "Reservoir Malaria Control and Sanitation Problems" (399) by Frank B. Wood
- Rt "Composting and Grinding" (556) Henry F. Soehngen, Chmn
- Rt "Dumping and Land Fill: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (474) Henry W. Taylor, Chmn
- Rt "Garbage Reduction: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (498) Henry W. Taylor, Chmn
- Rt "Hog Feeding: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (496) Henry W. Taylor, Chmn
- Rt "Incineration: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (497) Henry W. Taylor, Chmn
- Rt "Refuse Collection: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (473) Henry W. Taylor, Chmn
- Rt "Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1953" (388) Ernest W. Whitlock, Chmn
- Rt "State Activities and Fiscal Aspects: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (557) Henry W. Taylor, Chmn
- "Sanitary Engineering Aspects of Atmospheric Pollution" (392) by Louis C. McCabe
- "Treatment and Disposal of Atomic Energy Industry Wastes" (422) by Joseph A. Lieberman and Arthur E. Gorman
- "Twin Opportunities: Conservation and Engineering" (419) by Clarence Cottam
- "Use of Delaware River Water Through the Delaware and Raritan Canal" (452) by Howard W. Acken and Robert L. Hardman
- "Waste Disposal at a Steel Plant: General Problems" (492) by Ross Nebolsine
- "Waste Disposal at a Steel Plant: Treatment of Flue Dust Waste" (494) by Angus D. Henderson and John J. Baffa
- "Waste Disposal at a Steel Plant: Treatment of Sewage" (495) by John J. Baffa

# SUBJECT INDEX

## SANITARY ENGINEERING

- "Waste Disposal at a Steel Plant: Treatment of Sheet and Tin Mill Wastes" (493) by Hugh Mac-Dougall
- "Water Supply Problems" (555) by Francis S. Friel

## SEDIMENTATION

- "Sediment Sampling in Tidal Waterways" (427) by E. A. Schultz
- "The Present Status of Research on Sediment Transport" (565) by Ning Chien

## SHELLS

- "Analysis and Tests of a Cylindrical Shell Roof Model" (434) by Bruno Thurlimann and Bruce G. Johnston

## SOIL MECHANICS

- "A Large Scale Field Shear Test on a Bentonite Seam" (549) by S. T. Thorfinnson
- "A Soil Pressure Gauge for Laboratory Model Research" (569) by Peter W. Rowe
- Clo (553) of "The Structure of Inorganic Soil" (315) See Lambe, T. William
- Clo (553) of "Trafficability of Soil as Related to Mobility of Vehicles" (328) See Stewart, R. C.
- Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155) See Duke, C. Martin
- Dsc (379) of "Load Tests of Soils in the Miami Area" (215) See Jurett, J. Calvin
- Dsc (401) of "Estimating the True Consolidation Behavior of Clay from Laboratory Test Results" (311) See Schmertmann, John H.
- Dsc (401) of "Reduction in Soil Strength with Increase in Density" (228) See Foster, Charles R.
- Dsc (401) of "Special Procedures for Pavement Design" (195) See Palmer, L. A.
- Dsc (401) of "The Structure of Inorganic Soil" (315) See Lambe, T. William
- Dsc (478) of "Foundation Exploration--Denver Coliseum" (326) See Peck, Ralph B.
- Dsc (478) of "Pile Loading Tests, Morganza Floodway Control Structure" (324) See Mansur, Charles L.
- Dsc (478) of "Relief Well Systems for Dams and Levees" (192) See Turnbull, W. J.
- Dsc (478) of "The Structure of Inorganic Soil" (315)
- Dsc (518) of "Field Penetration Tests for Selection of Sheepfoot Rollers" (363) See Johnson, S. J.
- Dsc (518) of "Strength Characteristics of Compacted Clays" (360) See Leonards, Gerald A.
- Dsc (518) of "Trafficability of Soil as Related to Mobility of Vehicles" (328) See Stewart, R. C.
- "Effect of Sample Disturbance on the Strength of a Clay" (570) by Max L. Calhoun
- "Effectiveness of Sand Drains on New Jersey Turnpike" (571) by Charles M. Noble and O. J. Porter
- "Engineering Problems in Columbia Basin Varved Clay" (515) by Fred C. Walker and W. H. Irwin
- "Engineering Properties of Expansive Clays" (516) by W. G. Holtz and H. J. Gibbs
- "Exploration Principles for Major Engineering Works" (550) by W. R. Judd
- "Humid Area Soils and Moisture Factors for Irrigation Design" (426) by Fred H. Larson
- "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386) by K. P. Karpoff

- "Performance of Soils Versus Chemical Properties" (499) by C. Kinney Hancock
- "Rock-Fill Dam Design and Construction Problems" (514) by D. J. Bleifuss and James P. Hawke
- "Soil and Geologic Features of the Buford Project" (425) by William V. Conn
- "Soil Problems in the Southern Piedmont Region" (416) by George F. Sowers
- "Some Applications of Geology in Soil Mechanics and Foundation Engineering" (477) by Parker D. Trask and H. B. Seed
- "Some Practical Aspects of Sand Drain Stabilization" (551) by Stephen M. Olko
- "Studies of Bearpaw Shale at a Damsite in Saskatchewan" (476) by Robert Peterson
- "Subgrade Soil Classification System Used in Georgia" (512) by L. W. Freeman
- "Suction Force in Soils Upon Freezing" (445) by Alfreds R. Jumikis

## STRUCTURAL ENGINEERING

- "A Strain Balance System for Analysis of Redundant Structures" (486) by Oliver A. Baer
- "An Approach to Hot Laboratory Design" (448) by Gibson Morris
- "An Engineering Approach to Hot Cell Design" (446) by H. M. Glen
- "An Influence Line Analysis for Suspension Bridges" (558) by David J. Peery
- "Analysis and Tests of a Cylindrical Shell Roof Model" (434) by Bruno Thurlimann and Bruce G. Johnston
- "Analysis of the Vierendeel Girder by Balancing the Panel Moments" (560) by A. F. Diwan
- "Behavior of Structures Subjected to a Forced Vibration" (451) by Charles T. G. Looney
- Clo (563) of "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219) See Wylie, L. T.
- "Comparative Behavior of Bolted and Riveted Joints" (470) by Frank Baron and Edward W. Larson, Jr.
- "Continuous Deep Beams" (450) by David H. Cheng and Ming-Lung Pei
- "Design of the Chesapeake Bay Bridge" (543) by R. A. Gilmore
- Dsc (397) of "Flexure of Double Cantilever Beams" (158) See Wolosewick, F. E.
- Dsc (397) of "Group Loadings Applied to the Analysis of Frames" (183) See Morrison, I. F.
- Dsc (397) of "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219) See Wylie, L. T.
- Dsc (397) of "The Equivalent Rectangle in Prestressed Concrete" (187) See Peebles, John J.
- Dsc (397) of "Wind Load on Truss Bridges" (201) See Biggs, John M.
- Dsc (480) of "Hipped Plate Analysis, Considering Joint Displacement" (182) See Gazfar, Ibrahim
- Dsc (480) of "Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291) See Salvadori, Mario G.
- Dsc (480) of "Live Loading for Long-Span Highway Bridges" (198) See Ivy, R. J.
- Dsc (480) of "The Amplification of Stress in Flexible Steel Arches" (245) See Rowe, Robert S.
- Dsc (480) of "Wind Loads on Truss Bridges" (201) See Biggs, J. M.



## SUBJECT INDEX

### STRUCTURAL ENGINEERING

- Dsc (488) of "Design and Research for Welded Structures" (343) See Grover, La Motte
- Dsc (488) of "General Design of the East Delaware Water Supply Tunnel" (313) See Dore, Stanley M.
- Dsc (563) of "Design of Frames by Relaxation of Yield-Hinges" (322) See English, J. Morley
- Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298) See Grinter, L. E.
- "Examples of Timber Structure Failures" (544) by Michael N. Salgo
- "Fatigue in Riveted and Bolted Single Lap Joints" (469) by J. W. Carter, K. H. Lenzen, and L. T. Wily
- "Field Data for the Structural Design of Coal Bunkers" (430) by Herman Tachau and Ibrahim M. Mostafa
- "Foundation Failures in Residences and Small Structures" (561) by Karl V. Taylor
- "Frequency of Maximum Wind Speeds" (539) by H. C. S. Thom
- "Laboratory Tests of High Tensile Bolted Structural Joints" (441) by W. H. Munse, D. T. Wright, and N. M. Newmark
- "Mackinac Straits Bridge" (559) by D. B. Steinman
- "Moments and Deflections in Steel Grid Bridge Floors" (562) by H. J. Greenberg
- "Non-Uniform Torsion of Plate Girders" (449) by Gerald G. Kubo, Bruce G. Johnston, and William J. Eney
- "Resonant Vibration of Steel Stacks" (541) by E. A. Dockstader, W. F. Swiger, and Emory Ireland
- "Safety and the Probability of Structural Failure" (468) by A. M. Freudenthal
- "Shielding Structure Facilities for Atomic Energy Research" (447) by Frank Ring, Jr.
- "Slip of Joints Under Static Loads" (484) by R. A. Hechtman, R. D. Young, A. G. Chin, and E. R. Savikko
- "Structural Application of High-Strength Bolts" (485) by T. R. Higgins and E. J. Ruble
- "The Octagonal Girder Four Column Space Frame" (542) by P. C. Disario, J. S. Podolan, and N. A. Weil
- "The Vibration of Steel Stacks" (540) by Walter L. Dickey and Glenn B. Woodruff
- "The Work of the Research Council on Riveted and Bolted Joints" (440) by W. C. Stewart
- "Unsymmetrical Concrete Beam Loaded in Two Directions" (579) by W. D. Bigler

### SURVEYING

- "A Geometric Problem in Traveling Crane Track Alignment" (575) by J. E. Oliver and F. A. Maloney
- "Aerial Surveys for Reservoir Planning" (407) by Francis J. Guscio
- "An Industry Puts the Texas Coordinate System to Work" (580) by H. P. Cooper

- Clo (525) of "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305) See Beavin, Benjamin Everett, Sr.
- "Georgia's Proposed Plat Law" (408) by C. R. Roberts
- "Photogrammetry in City Planning and Operations" (574) by Louis A. Woodward
- "Plane Coordinates for Industrial Sites" (576) by Max O. Laird
- "Photogrammetry Aids the Pennsylvania Turnpike" (577) by G. B. Gilbert
- "Photogrammetry and its Application" (581) by Alfred O. Quinn
- "Surveys and Maps for Pipelines" (393) by George E. MacDonald

### TENNESSEE

- "Coal-Handling Design for TVA Steam Plants" (412) by George P. Palo

### TRUSSES

- "Analysis of the Vierendeel Girder by Balancing the Panel Moments" (560) by A. F. Diwan

### WATER SUPPLIES

- "National Water Supply" (442) by Thorndike Saville
- "New York's Extension of Its Sources to the Delaware" (454) by Karl R. Kennison
- "Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1953" (388) Ernest W. Whitlock, Chmn
- "Water Supply Problems" (555) by Francis S. Friel

### WATERWAYS

- "Deep Water Harbors in the Southeast" (409) by D. P. Billard
- "Development of the Delaware River for Commerce" (503) by B. B. Talley
- Dsc (504) of "Design Curves for Anchored Steel Sheet Piling" (165) See Boyer, Walter C.
- Dsc (504) of "Salt Water Barriers in the San Francisco Bay" (259) See Nishkian, B. L.
- Dsc (504) of "Some Economic Aspects of Waterways Projects" (318) See Faison, Haywood P.
- "Diversion of Canals" (461) by Hassan M. Ismail
- "Navigation on the Warrior-Tombigbee River System" (414) by Ralph W. Mueller
- "Problems Encountered in Improving a Deep Water Harbor" (502) by Harry Sugden
- "Sediment Sampling in Tidal Waterways" (427) by E. A. Schultz

### WIND

- "Frequency of Maximum Wind Speeds" (539) by H. C. S. Thom

# AUTHOR INDEX

- ACKEN, HOWARD W.  
"Use of Delaware River Water Through the Delaware and Raritan Canal" (452) with Robert L. Hardman
- ALBERTSON, M. L.  
See Benedict, P. C. (538)
- ALEXANDER, G. N.  
Dsc (568) of "Estimation of Flood Probabilities" (438)
- ALEXANDER, HARRY W.  
"History of the City Planning Division of the ASCE" (509)
- ALLEN, GEARY M., JR.  
Dsc (491) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354)
- AMBROSE, HARRY H.  
Dsc (491) of "A New Concept of Flow in Rough Conduits" (390)
- AMIN, MAHMOUD SHAARAWI  
See Fathy, A. (564)
- ANDERSON, NORVAL E.  
Dsc (437) of "Settling Rates of Suspensions in Solids Contact Units" (186)
- ARCHER, JOHN S.  
See Hansen, Robert J. (396)
- ARCHIBALD, GEORGE E.  
"Civil Engineering Features of Delta Steam Electric Station" (405)
- ASHDOWN, A. J.  
Dsc (429) of "Inelastic Behaviour of Reinforced Concrete Members Subjected to Short Time Static Loads" (286)
- ATHERTON, TRACY L.  
Dsc (525) of "Cooperative Topographic Mapping in California" (277)
- BACON, VINTON B.  
See McKee, J. B. (481)
- BAER, OLIVER A.  
"A Strain Balance System for Analysis of Redundant Structures" (486)
- BAFFA, JOHN J.  
"Waste Disposal at a Steel Plant: Treatment of Sewage" (495)  
See Henderson, Angus D. (494)
- BAKER, G. R.  
Dsc (463) of "Use of Colorado River Water in California" (347)
- BAKER, J. F.  
Dsc (532) with M. R. Horne of "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292)
- BAKER, R. F.  
Dsc of 190: D. P. Krynine and Richard J. Woodward (501)  
Clo (501) of "Analysis of Corrective Actions for Highway Landslides" (190)
- BALLESTER, RODOLFO E.  
Dsc (379) of "Characteristics of Fixed-Dispersion Cone Valves" (153)  
Dsc (538) of "Morning-Glory Shaft Spillways: Prototype Behavior" (431)
- BALOG, LOUIS  
Dsc (480) of "Live Loading for Long-Span Highway Bridges" (198)
- BARBER, E. S.  
Dsc (401) of "The Structure of Inorganic Soil" (315)
- BARKER, CHARLES L.  
Dsc (428) of "Nonlinear Electrical Analogy for Pipe Networks" (139)
- BARON, FRANK  
"Comparative Behavior of Bolted and Riveted Joints" (470) with Edward W. Larson, Jr.
- BARTON, JAMES R.  
Dsc (396) of "Mechanics of Manifold Flow" (258)
- BAUMAN, E. W.  
Dsc (523) of "Base Course and Bituminous Pavement Requirements" (424)
- BAUMANN, PAUL  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)  
Dsc (572) of "Anchored Bulkheads" (262)
- BEARD, LEO R.  
"Estimation of Flood Probabilities" (438)  
Dsc of 438: H. C. S. Thom; M. A. Benson and S. E. Rantz; and G. N. Alexander (568)
- BEAVIN, BENJAMIN EVERETT, SR.  
Dsc of 305: Milton O. Schmidt (389)  
Clo (525) of "Surveys and Maps--Vital to the Solution of Problems of Mass Transportation" (305)
- BEEDELE, LYNN S.  
See Ketter, Robert L. (532)
- BEKEY, G. A.  
See Taylor, E. H. (522)
- BELL, FRANK M.  
See Chunn, Clifford J. (418)
- BENEDICT, P. C.  
Clo (538) with M. L. Albertson and D. Q. Matejka of "Total Sediment Load Measured in Turbulence Flume" (230)
- BENJAMIN, JACK R.  
Dsc (488) of "Design and Research for Welded Structures" (343)

# AUTHOR INDEX

## BENJAMIN, JACK R.

Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)

## BENNETT, P. T.

Dsc (478) of "Relief Well Systems for Dams and Levees" (192)

Dsc (518) with Paul E. Wohlt of "Strength Characteristics of Compacted Clay" (360)

## BENSON, M. A.

Dsc (568) with S. E. Rantz of "Estimation of Flood Probabilities" (438)

## BERG, PAUL H.

"Irrigation Potentialities in Arkansas" (404)  
Dsc of 404: G. H. Hargreaves (463)

## BERINDOAGUE, GEORGE J.

See Schacherl, Robert D. (500)

## BERNDT, NEIL R.

Dsc of 271: Harry Rubey (389)

## BIGGS, JOHN M.

Dsc of 201: F. B. Farquharson (397)  
Clo (480) of "Wind Loads on Truss Bridges" (201)

## BIGLER, W. D.

"Unsymmetrical Concrete Beam Loaded in Two Directions" (579)  
Dsc (572) of "Anchored Bulkheads" (262)

## BIJLAARD, P. P.

Dsc of 292: Robert L. Ketter and Lynn S. Beedle; and J. F. Baker and M. R. Horne (532)  
Clo (532) with G. P. Fisher and George Winter of "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292)

## BILLARD, D. P.

"Deep Water Harbors in the Southeast" (409)

## BINCKLEY, J. E.

See Graves, L. D. (478)

## BLACK, RUSSELL VANNEST

"A Steel Plant's Effect on Regional Planning and Development" (507)

## BLAISDELL, FRED W.

"Equation of the Free-Falling Nappe" (482)  
"The Box Inlet Drop Spillway and Its Outlet" (534) with Charles A. Donnelly  
Dsc of 354: Geary M. Allen, Jr., Wen-Hsiung Li, and Arthur L. Collins (491)  
Clo (538) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354)  
Dsc (538) of "Morning-Glory Shaft Spillways: Performance Tests on Prototype and Model" (433)  
Dsc (538) of "Morning-Glory Shaft Spillways: Prototype Behavior" (431)  
Dsc (568) of "Morning-Glory Shaft Spillways: Determination of Pressure-Controlled Profiles" (432)

## BLANEY, HARRY F.

Dsc (522) of "Humid Area Soils and Moisture Factors for Irrigation Design" (426)

## BLEICH, H. H.

Dsc of 287: P. S. Symonds (429)  
Clo (530) with M. G. Salvadori of "Impulsive Motion of Elasto-Plastic Beams" (287)

## BLEIFUSS, D. J.

"Rock-Fill Dam Design and Construction Problems" (514) with James P. Hawke

## BLUM, LOUIS P.

Dsc (436) of "The Allegheny Conference--Planning in Action" (131)

## BOEGLI, WILLIS C.

"Economic Effect of Irrigation in a Subhumid Area" (398)

## BORELE, MLADEN

Dsc (396) of "Applications of the Relaxation Technique in Fluid Mechanics" (223)

## BORGER, J. G.

Dsc of 241: Louis A. Nees and Charles F. Phillips (523)

## BORLAND, W. M.

See Lane, E. W. (479)

## BOSE, N. K.

Dsc (522) of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)

## BOWERMAN, F. R.

See Stone, Ralph (471)

## BOYER, WALTER C.

Dsc of 165: Gregory P. Tschobanarioff (504)  
Clo (504) with Henry M. Lummis, III of "Design Curves for Anchored Steel Sheet Piling" (165)  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)

## BRADLEY, J. N.

"Morning-Glory Shaft Spillways: Prototype Behavior" (431)  
Dsc of 169: Guido Wyss; Sam Shultis; Bob Buehler; and F. B. Campbell and A. A. McCool (384)  
Clo (384) of "Rating Curves for Flow over Drum Gates" (169)  
Dsc of 431: Bernard Doncon (491)  
Dsc of 431: D. S. Walter, Fred W. Blaisdell, R. E. Ballester, and J. W. Ridley (538)

## BRAFF, LLOYD

Dsc of 191: James L. Foley, Jr. (459 and 487)  
Clo (459 and 487) of "The Engineer's Role in Metropolitan Traffic Planning" (191)

## BRAUDEAU, G.

See Nizery, A. (522)

## BRESLER, B.

Dsc (429) of "Inelastic Behaviour of Reinforced Concrete Members Subjected to Short Time Static Loads" (286)

## BRISKE, RUDOLF

Dsc (572) of "Anchored Bulkheads" (262)

# AUTHOR INDEX

- BROWN, PAUL C.**  
"Planning of Air Force Bases" (402)
- BUEHLER, BOB**  
Dsc (384) of "Rating Curves for Flow over Drum Gates" (169)  
Dsc (437) of "A Direct Step Method for Computing Water Surface Profiles" (180)
- BURKE, MAXWELL F.**  
Dsc of 297: Stepnoas Kolupaila, Frank B. Campbell, Arthur L. Collins, and R. Clifford Youngquist (479)  
Clo (479) of "High Velocity Tests in a Penstock" (297)
- BUZZELL, D. A.**  
"Recent Trends in Hydraulic Gate Design" (517)
- BYERS, WILLIAM G.**  
Dsc (480) of "Live Loading for Long-Span Highway Bridges" (198)
- CALENDER, KENNETH E.**  
"Airports and Aviation in Latin America" (394)
- CALHOON, MAX L.**  
"Effect of Sample Disturbance on the Strength of a Clay" (570)
- CAMP, THOMAS R.**  
Dsc (395) of "An Analysis of Water Quality Criteria" (231)
- CAMPBELL, FRANK B.**  
Clo (538) of "Master Library List of Fluid Mechanics and Hydraulic Engineering Titles: Progress Report of the Committee on Research of the Hydraulics Division" (380)  
Dsc (384) with A. A. McCool of "Rating Curves for Flow over Drum Gates" (169)  
Dsc (479) of "High Velocity Tests in a Penstock" (297)
- CARLSON, ROY W.**  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)
- CARPENTER, J. C.**  
Dsc of 351: H. M. Raedschelders (501)
- CARR, BRAXTON B.**  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- CARSTENS, M. R.**  
Dsc (396) with John Roberson of "Mechanics of Manifold Flow" (258)
- CARTER, J. W.**  
"Fatigue in Riveted and Bolted Single Lap Joints" (469) with K. H. Lenzen and L. T. Wily
- CARTER, ROLLAND W.**  
See Kindsvater, Carl E. (467)  
See Tracy, H. J. (413)
- CHANDA, B.**  
See Ellassiouty, I. M. Mostafa (568)
- CHENG, DAVID H.**  
"Continuous Deep Beams" (450) with Ming-Lung Pei
- CHIEN, NING**  
"The Present Status of Research on Sediment Transport" (565)  
See Einstein, H. A. (566)
- CHILDE, C. E.**  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- CHIN, A. G.**  
See Hechtman, R. A. (484)
- CHOW, VEN TE**  
"The Log-Probability Law and its Engineering Applications" (536)  
Dsc (428) of "Rainfall Studies Using Rain-Gage Networks and Radar" (178)
- CHU, HENRY HSIEN**  
See Kelfer, Clint J. (383)
- CHU, KUANG-HAN**  
Dsc (480) of "Live Loading for Long-Span Highway Bridges" (198)  
Dsc (553) of "Pile Foundations for Buildings" (385)
- CHUNN, CLIFFORD J.**  
"Testing for Construction and Evaluation of Airport Pavements" (418) with Frank M. Bell
- CHURCHILL, MILO A.**  
See Davidson, Charles M. (546)
- CLOUGH, RAY W.**  
Dsc (397) of "Flexure of Double Cantilever Beams" (158)
- COCHRANE, H. H.**  
"Foundation Problems of Kerr No. 3 Hydro Plant" (533) with R. A. Sutherland
- COLLINS, ARTHUR L.**  
Dsc (479) of "High Velocity Tests in a Penstock" (297)  
Dsc (491) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354)
- CONN, WILLIAM V.**  
"Soil and Geologic Features of the Buford Project" (425)
- CONWELL, WILLIAM A.**  
Dsc (396) of "Numerical Analysis of Frames with Curved Girders" (250)  
Dsc (397) of "Flexure of Double Cantilever Beams" (158)
- COOKINGHAM, L. P.**  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- COOPER, H. P.**  
"An Industry Puts the Texas Coordinate System to Work" (580)

# AUTHOR INDEX

- CORRADI, P.  
Clo (481) with Burr Lenhart of "The Key West Aqueduct" (208)
- COTTAM, CLARENCE  
"Twin Opportunities: Conservation and Engineering" (419)
- CRAEMER, HERMAN  
Dsc (480) of "Hipped Plate Analysis, Considering Joint Displacement" (182)
- CRAWFORD, C. C.  
See Evans, W. E. (465)
- CRISP, ROBERT L., JR.  
Dsc (401) of "Estimating the True Consolidation Behavior of Clay from Laboratory Test Results" (311)
- CRITCHLOW, HOWARD T.  
Dsc of 140: Harold E. Gray (391)  
Clo (391) of "Irrigation Water Rights in the Humid Areas" (140)
- DALRYMPLE, GORDON B.  
"Fill Utilization for Building Foundations" (417)  
Dsc of 417: Dale T. Harroun (553)
- DAMES, TRENT R.  
Dsc (379) with David C. Liu of "Field Study of a Sheet-Pile Bulkhead" (155)
- DAVIDSON, CHARLES M.  
"Interrelation of Stream Regulation and Stream Pollution" (546) with Milo A. Churchill
- DAVIS, JAMES W.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- DELLEUR, J. W.  
Dsc (479) of "Laminar to Turbulent Flow in a Wide Open Channel" (188)
- DENTONI, DARRHL L.  
See Vennard, John K. (396)
- DIACHSHIN, ALEXANDER N.  
Dsc of 167: Isadore Nusbaum (395)  
Clo (395) with Seth G. Hess and William T. Ingram of "Sewage Disposal in Tidal Estuaries" (167)  
See Ingram, William T. (455)
- DICKERSON, LEWIS A.  
Dsc (525) of "Aerial Surveys for Reservoir Planning" (407)
- DICKEY, WALTER L.  
"The Vibration of Steel Stacks" (540) with Glenn B. Woodruff
- DISARIO, P. C.  
"The Octagonal Girder Four Column Space Frame" (542) with J. S. Podolan and N. A. Weil
- DITBRENNER, E. E.  
Dsc (479) of "River-Bed Scour During Floods" (254)
- DIWAN, A. F.  
"Analysis of the Vierendeel Girder by Balancing the Panel Moments" (560)
- DOCKSTADER, E. A.  
"Resonant Vibration of Steel Stacks" (541) with W. F. Swiger and Emory Ireland
- DONCLON, BERNARD  
Dsc (491) of "Morning-Glory Shaft Spillways: Prototype Behavior" (431)
- DONNELLY, CHARLES A.  
See Blaisdell, Fred W. (534)
- DORE, STANLEY M.  
Dsc of 313: Thomas K. A. Hendrick (488)
- DOUGHERTY, GALE B.  
See Elder, Rex A. (379)
- DOUMA, J. H.  
Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175)
- DUCLOS, LOUIS  
Clo (501) of "Highway Bridges on Deep Foundations" (276)
- DUKE, C. MARTIN  
Dsc of 155: Gregory P. Tschebotarioff; Walter C. Boyer; Paul Baumann; S. Packshaw; W. F. Way; J. Owen Lake; K. Terzaghi; D. P. Krynnie; Trent R. Dames and David C. Liu; and Roy W. Carlson (379)  
Clo (379) of "Field Study of a Sheet-Pile Bulkhead" (155)
- DUNHAM, JOHN W.  
"Pile Foundations for Buildings" (385)  
Dsc of 385: Kuang-Han Chu, B. A. Kantey, John A. Focht, Jr., James F. McNulty, and C. Y. Teng (553)  
Dsc (478) of "Pile Loading Tests, Morganza Floodway Control Structure" (324)
- ECKENFELDER, W. WESLEY, JR.  
"Industrial Waste Process Design" (411) with Donald J. O'Connor
- ECKLUND, CONRAD A.  
Dsc of 277: Tracy L. Atherton (525)
- EINSTEIN, H. A.  
"Similarity of Distorted River Models with Movable Bed" (566) with Ning Chien
- ELASSIOUTY, I. M. MOSTAFA  
Dsc (568) with B. Chanda and Howard P. Johnson of "Morning-Glory Shaft Spillways: Determination of Pressure-Controlled Profiles" (432)
- ELDER, REX A.  
Dsc of 153: Edwin W. Murphy, Rodolfo E. Ballester, T. T. Siao, and Verne Gongwer (379)  
Clo (379) with Gale B. Dougherty of "Characteristics of Fixed-Dispersion Cone Valves" (153)
- ELLIS, T. O.  
See Taylor, E. H. (522)

# AUTHOR INDEX

- ENEY, WILLIAM J.  
See Kubo, Gerald G. (449)
- ENGLISH, J. MORLEY  
Dsc 322: Noel W. Murray and Herman Tachau (563)  
Clo (563) of "Design of Frames by Relaxation of Yield-Hinges" (322)
- ESCOBAR, JULIO  
Dsc (396) of "Mechanics of Manifold Flow" (258)
- ESCOFFIER, FRANCIS F.  
"Diversion Flow Through Buford Dam Conduits" (535)
- EVANS, W. E.  
Dsc of 273: C. E. Withers and Henry M. Paynter (465)  
Clo (465) of "Charts for Designing Air Chambers for Pump Discharge Lines" (273) with C. C. Crawford
- EZRA, ARTHUR A.  
Dsc of 180: I. H. Steinberg, C. A. M. Gray, Bob Buehler, and Monir M. Kansoh (437)  
Clo (437) of "A Direct Step Method for Computing Water Surface Profiles" (180)
- FAISON, HAYWOOD P.  
Dsc of 318: Duane Orr; L. P. Cookingham; Marvin B. Marsh; Owen G. Stanley; H. W. Schull, Jr.; N. C. Magnuson; Braxton B. Carr; C. E. Childe; Francis J. Wilson and N. R. Graham; Charles L. Hall; and James W. Davis (504)  
Clo (504) of "Some Economic Aspects of Waterways Projects" (318)
- FARQUHARSON, F. B.  
Dsc (397) of "Wind Load on Truss Bridges" (201)
- FARRER, L. A.  
"Design Rainfall: Central and Southern Florida Project" (519)
- FATHY, A.  
"Hydraulics of the Free Overfall" (564) with Mahmoud Shaarawi Amin
- FENSKE, CARL W.  
Dsc (553) of "Modern Procedures for Underground Investigations" (435)
- FISHER, G. P.  
See Bijlaard, P. P. (532)
- FOCHT, JOHN A., JR.  
Dsc (478) of "Relief Well Systems for Dams and Levees" (192)  
Dsc (553) of "Pile Foundations for Buildings" (385)  
Dsc (573) of "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386)  
See Mansur, Charles L. (478)
- FOLEY, JAMES L., JR.  
Dsc (459 and 487) of "The Engineer's Role in Metropolitan Traffic Planning" (191)
- FORD, PERRY M.  
Dsc (568) of "Statistical Theory of Droughts" (439)
- FOSTER, CHARLES R.  
Clo (401) of "Reduction in Soil Strength with Increase in Density" (228)  
Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163)
- FOSTER, EDGAR E.  
Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175)
- FOSTER, H. ALDEN  
"Flood Insurance" (483)
- FOWLER, LLOYD C.  
See Todd, David K. (391)
- FRAENKEL, S. J.  
Dsc of 185: Robert J. Hansen and John S. Archer (396)  
Clo (396) with L. E. Grinter of "The Non-Elastic Behavior of Bridges Under Impulsive Loads" (185)
- FRANCIOSI, VINCENZO  
"Buckling in the Elasto-Plastic Range" (531)
- FRANCIS, A. J.  
Dsc (563) of "Laboratory Tests of High Tensile Bolted Structural Joints" (441)
- FREEMAN, L. W.  
"Subgrade Soil Classification System Used in Georgia" (512)
- FREUDENTHAL, A. M.  
"Safety and the Probability of Structural Failure" (468)
- FRIEL, FRANCIS S.  
"Water Supply Problems" (555)
- FROELICH, WILLIAM R. B.  
"Is Parking a Public Responsibility?" (510)
- FUCHS, S. J.  
Dsc of 199: M. Z. v. Krzywoblocki and R. H. Wood (530)  
Clo (530) of "Plates with Boundary Conditions of Elastic Support" (199)
- FULLER, ALMON H.  
Dsc (397) of "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219)
- FURBANK, ARTHUR W.  
Dsc (481) of "Stabilization of Municipal Refuse by Composting" (302)
- GAAFAR, IBRAHIM  
Dsc of 182: Herman Craemer; James M. Paulson and L. C. Maugh; and R. Gartner (480)  
Clo (480) of "Hipped Plate Analysis, Considering Joint Displacement" (182)
- GANDOLFO, JOSE S.  
Dsc (522) of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)



# AUTHOR INDEX

- GARDNER, F. H.  
Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163)
- GARTNER, R.  
Dsc (480) of "Hipped Plate Analysis, Considering Joint Displacement" (182)
- GERDEL, R. W.  
Dsc (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- GEUDER, NORMAN O.  
Dsc (525) of "Surveys and Maps for Pipelines" (393)
- GIBBS, H. J.  
Dsc (518) with J. W. Hilf of "Strength Characteristics of Compacted Clays" (360)  
See Holtz, W. G. (516)
- GILBERT, G. B.  
"Photogrammetry Aids the Pennsylvania Turnpike" (577)
- GILMORE, R. A.  
"Design of the Chesapeake Bay Bridge" (543)
- GIZIENSKI, STANLEY F.  
See McMaster, Howard M. (553)
- GLEN, H. M.  
"An Engineering Approach to Hot Cell Design" (446)
- GLOVER, R. E.  
Dsc (463) of "Unsteady Flow in Open Type Pipe Irrigation Systems" (369)
- GOLDBERG, JOHN E.  
Clo (429) of "The Application of Heaviside's Step-Function to Beam Problems" (202)
- GONGWER, VERNE  
Dsc (379) of "Characteristics of Fixed-Dispersion Cone Valves" (153)
- GOODRICH, R. D.  
Dsc (568) of "Statistical/Theory of Droughts" (439)
- GORMAN, ARTHUR E.  
See Lieberman, Joseph A. (422)
- GOTOLSKI, WILLIAM H.  
Dsc (573) of "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386)
- GOULD, RICHARD H.  
Dsc of 307: Milton Spiegel and Miles Lamb (481)
- GRAHAM, N. R.  
See Wilson, Francis J. (504)
- GRAVES, L. D.  
Dsc (478) with J. E. Binckley of "Pile Loading Tests, Morganza Floodway Control Structure" (324)
- GRAY, C. A. M.  
Dsc of 274: Pin-Nam Lin and Henry M. Paynter (538)  
Clo (538) of "Analysis of Water Hammer by Characteristics" (274)  
Dsc (437) of "A Direct Step Method for Computing Water Surface Profiles" (180)
- GRAY, HAMILTON  
Dsc (573) of "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386)
- GRAY, HAROLD E.  
Dsc (391) of "Irrigation Water Rights in the Humid Areas" (140)
- GREENBERG, H. J.  
"Moments and Deflections in Steel Grid Bridge Floors" (562)
- GRINTER, L. E.  
Dsc of 298: T. C. Kavanagh, Ralph W. Stewart, W. Merchant, Jack R. Benjamin, Joseph G. Perri, Richard H. Hadley, and Ming-Lung Pei (563)  
Clo (563) with C. H. Tsao of "Joint Translation by Cantilever Moment Distribution" (298)  
See Fraenkel, S. J. (396)
- GROVER, LA MOTTE  
Dsc of 343: Jack R. Benjamin, George W. Lamb, F. J. Tamanini, and Norman B. Jones (488)  
Clo (488) of "Design and Research for Welded Structures" (343)
- GUMBEL, E. J.  
"Statistical Theory of Droughts" (439)  
Dsc of 439: Perry M. Ford, R. D. Goodrich, and Shuh-Chai Lee (568)
- GUMENSKY, D. B.  
Dsc of 175: Leland S. Rhodes, Gurmukh S. Sarkaria, J. H. Douma, Edgar E. Foster, and Thomas J. Rhone (384)  
Clo (384) of "Design of Side Walls in Chutes and Spillways" (175)
- GUSCIO, FRANCIS J.  
"Aerial Surveys for Reservoir Planning" (407)  
Dsc of 407: Lewis A. Dickerson (525)
- HABERMAN, W. L.  
"An Experimental Study of Bubbles Moving in Liquids" (387) with R. K. Morton
- HADLEY, RICHARD H.  
Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)
- HAFTERSON, HAROLD D.  
Dsc (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- HAHN, PHILIP A.  
Dsc of 196: Louis A. Nees (459 and 487)  
Clo (459 and 487) of "Recent Airport Design and Development" (196)
- HALL, CHARLES L.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)

# AUTHOR INDEX

- HANCOCK, C. KINNEY**  
 "Performance of Soils Versus Chemical Properties" (499)
- HANSEN, J. BRINCH**  
 Dsc (572) of "Anchored Bulkhead's" (262)
- HANSEN, ROBERT J.**  
 Dsc (396) with John S. Archer of "The Non-Elastic Behavior of Bridges Under Impulsive Loads" (185)
- HANSEN, VAUGHN E.**  
 Dsc of 142: Ahmed Shukry; Carl Rohwer; and David K. Todd and Lloyd C. Fowler (391)  
 Clo (391) of "Unconfined Ground Water Flow to Multiple Wells" (142)
- HARDING, RICHARD S.**  
 See Moore, William W. (518)
- HARDMAN, ROBERT L.**  
 See Acken, Howard W. (452)
- HARGREAVES, G. H.**  
 Dsc (463) of "Irrigation Potentialities in Arkansas" (404)  
 Dsc (522) of "Humid Area Soils and Moisture Factors for Irrigation Design" (426)
- HARLEMAN, DONALD R. F.**  
 Dsc (428) with Edward N. Rein of "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146)  
 See Ippen, Arthur T. (526)
- HARRISON, E. S.**  
 Dsc of 184: G. H. Hickox (437)  
 Clo (437) with Carl E. Kindsvater of "Dam Modifications Checked by Hydraulic Models" (184)
- HARROUN, DALE T.**  
 Dsc (553) of "Fill Utilization for Building Foundations" (417)
- HARTIGAN, JAMES J.**  
 Dsc (396) of "Mechanics of Manifold Flow" (258)
- HAWKE, JAMES P.**  
 See Bleifuss, D. J. (514)
- HECHTMAN, R. A.**  
 "Slip of Joints Under Static Loads" (484) with R. D. Young, A. G. Chin, and E. R. Savikko
- HENDERSON, ANGUS D.**  
 "Waste Disposal at a Steel Plant: Treatment of Flue Dust Waste" (494) with John J. Baffa
- HENDRICK, THOMAS K. A.**  
 Dsc (488) of "General Design of the East Delaware Water Supply Tunnel" (313)
- HENDRICKS, E. L.**  
 "Surface-Water Supply for Irrigation in the Vermillion River Basin, Louisiana" (489)  
 Dsc of 489: C. K. Oakes (568)
- HENRY, HAROLD R.**  
 Dsc (538) of "Backwater Effects of Open Channel Constrictions" (415)
- HERROLD, G. H.**  
 "Solving the Engineering Problems of Metropolitan Areas" (511)
- HESS, SETH G.**  
 See Diachishin, Alexander N. (395)
- HICKERSON, T. F.**  
 Clo (501) of "A Mathematical Examination of Spiraled Compound Curves" (357)
- HICKOX, G. H.**  
 Dsc (437) of "Dam Modifications Checked by Hydraulic Models" (184)
- HIGGINS, T. R.**  
 "Structural Application of High-Strength Bolts" (485) with E. J. Ruble
- HILF, J. W.**  
 See Gibbs, H. J. (518)
- HILL, H. N.**  
 Dsc of 300: R. R. McCalley, Jr., (429)
- HIRASHIMA, K. B.**  
 Dsc (573) of "Sand Drain Applications by the Port of New York Authority" (456)
- HODGES, PAUL V.**  
 Dsc (491) of "Backwater Effects of Open Channel Constrictions" (413)
- HOLTZ, W. G.**  
 "Engineering Properties of Expansive Clays" (516) with H. J. Gibbs
- HOMACK, PETER**  
 Dsc (481) of "Performance of Biofiltration Plants by Three Methods" (336)
- HORNE, MICHAEL R.**  
 Dsc (480) of "Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291)  
 See Baker, J. F. (532)
- HORONJEFF, R.**  
 Dsc (401) of "Special Procedures for Pavement Design" (195)
- HOUEK, PAUL J.**  
 "Planning of the Modern Air Base" (403)
- HOUGH, FLOYD W.**  
 "A Modern Military Grid System" (524)
- HOWLAND, CHARLES A.**  
 "Philadelphia Capital Budget and Program Procedures" (508)
- HOYER, C. O.**  
 Clo (506) of "Development of the Chemical and Allied Industry in the South" (226)
- HSU, EN-YUN**  
 See McNown, John S. (530)
- HU, LU-SHIEN**  
 Dsc (397) of "Flexure of Double Cantilever Beams" (158)

# AUTHOR INDEX

## HUBERTY, M. R.

Dsc of 319: M. Ram and W. H. Nalder (463)  
Clo (463) of "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319)

## HUDSON, H. E., JR.

Dsc of 178: Ven Te Chow (428)  
Clo (428) with G. E. Stout and F. A. Huff of  
"Rainfall Studies Using Rain-Gage Networks and Radar" (178)

## HUFF, F. A.

See Hudson, H. E., Jr. (428)

## INGRAM, WILLIAM T.

"Effect of Cabin Cruiser Waste Discharge on a Small Harbor" (455) with Alexander Diachishin  
See Diachishin, Alexander N. (395)

## IPPEN, ARTHUR T.

"Verification of Theory for Oblique Standing Waves" (526) with Donald R. F. Harleman

## IRELAND, EMORY

See Dockstader, E. A. (541)

## IRWIN, W. H.

See Walker, Fred C. (515)

## ISMAIL, HASSAN M.

"Diversion of Canals" (461)

## IVY, R. J.

Dsc of 198: Louis Balog, Glenn B. Woodruff, William G. Byers, and Kuang-Han Chu (480)  
Clo (480) with T. Y. Lin, Stewart Mitchell, N. C. Raab, V. J. Richey, and C. F. Scheffey of  
"Live Loading for Long-Span Highway Bridges" (198)

## IWAGAKI, YUICHI

Dsc (479) of "Laminar to Turbulent Flow in a Wide Open Channel" (188)

## IZZARD, CARL F.

Dsc (491) of "Backwater Effects of Open Channel Constrictions" (413)

## JARVIS, CLARENCE S.

Dsc (504) of "Salt Water Barriers in the San Francisco Bay" (259)

## JERVIS, W. H.

Dsc (478) of "Relief Well Systems for Dams and Levees" (192)

## JESSOP, GEORGE A.

Dsc (465) of "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294)

## JOHANNESSEN, W.

Dsc of 163: L. A. Palmer, F. H. Gardner, G. M. J. Williams, C. R. Foster, and H. M. McMaster (459)  
Clo (459) of "A Comparison of Design Methods for Airfield Pavements" (163)

## JOHNSON, HOWARD P.

See Ellassiouty, I. M. Mostafa (568)

## JOHNSON, S. J.

Dsc of 363: B. A. Kantey (518)

## JOHNSTON, BRUCE G.

See Kubo, Gerald G. (449)  
See Thurlimann, Bruno (434)

## JONES, NORMAN B.

Dsc (488) of "Design and Research for Welded Structures" (343)

## JONES, PAUL H.

"Ground Water in the Vermilion River Basin, Louisiana" (490)

## JONES, S. LEARY

Dsc (481) of "Reservoir Malaria Control and Sanitation Problems" (399)

## JUDD, W. R.

"Exploration Principles for Major Engineering Works" (550)  
"Foundation Problems of the Eklutna Project" (444)  
Dsc (553) of "Modern Procedures for Underground Investigations" (435)

## JUMIKIS, ALFRED S. R.

"Suction Force in Soils upon Freezing" (445)  
Dsc of 445: D. P. Krynlne (572)

## JURETT, J. CALVIN

Dsc of 215: James F. McNulty (379)

## KALINSKE, A. A.

Dsc of 186: Norval E. Anderson and Ross E. McKinney (437)  
Clo (437) of "Settling Rates of Suspensions in Solids Contact Units" (186)

## KANSOH, MONIR M.

Dsc (437) of "A Direct Step Method for Computing Water Surface Profiles" (180)

## KANTEY, B. A.

Dsc (518) of "Field Penetration Tests for Selection of Sheepfoot Rollers" (363)  
Dsc (553) of "Pile Foundations for Buildings" (385)

## KAPP, MARTIN S.

See Kyle, John M. (456)

## KARPOFF, K. P.

"Pavlovsky's Theory for Phreatic Line and Slope Stability" (386)  
Dsc of 386: Hamilton Gray, John A. Focht, Jr., Abdel-Aziz I. Kashef, and William H. Gotolski (573)

## KASHEF, ABDEL-AZIZ I.

Dsc (491) of "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362)  
Dsc (573) of "Pavlovsky's Theory for Phreatic Line and Slope Stability" (386)

## KAVANAGH, T. C.

Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)

# AUTHOR INDEX

- KAZMANN, RAPHAEL G.**  
Dsc (491) of "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362)
- KEIFER, CLINT J.**  
"Backwater Functions by Numerical Integration" (383) with Henry Hsieh Chu
- KENNISON, KARL R.**  
"New York's Extension of Its Sources to the Delaware" (454)
- KETTER, ROBERT L.**  
Dsc of 330: George Winter (532)  
Dsc (532) with Lynn S. Beedle of "Strength of Columns Elastically Restrained and Eccentrically Loaded" (292)
- KINDSVATER, CARL E.**  
"Hydraulic Model Studies of Martin Dam Draft Tubes" (382) with R. R. Randolph, Jr.  
Rt "Master Library List of Fluid Mechanics and Hydraulic Engineering Titles" (380)  
"Tranquil Flow Through Open-Channel Constrictions" (467) with Rolland W. Carter  
See Campbell, Frank B. (538)  
See Harrison, E. S. (437)
- KINNEY, JOHN E.**  
"Cooperation Between Industries and Regulatory Agencies" (554)
- KLUGE, R. W.**  
See Wyly, L. T. (563)
- KOEBEL, FRED E.**  
Dsc (397) of "The Equivalent Rectangle in Prestressed Concrete Design" (187)
- KOLUPAILA, STEPONAS**  
Dsc (479) of "High Velocity Tests in a Penstock" (297)
- KRAUS, JOHN F.**  
Dsc (436) of "Unified Mass-Transportation System for New York" (171)
- KRYNINE, D. P.**  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)  
Dsc (501) with Richard J. Woodward of "Analysis of Corrective Actions for Highway Landslides" (190)  
Dsc (572) of "Suction Force in Soils upon Freezing" (445)
- KRZYWOBLOCKI, M. Z. v.**  
Dsc (530) of "Plates with Boundary Conditions of Elastic Support" (199)
- KUBO, GERALD G.**  
"Non-Uniform Torsion of Plate Girders" (449) with Bruce G. Johnston and William J. Eney  
Dsc of 449: DeForest A. Matteson, Jr. (563)
- KYLE, JOHN M.**  
"Sand Drain Applications by the Port of New York Authority" (456) with Martin S. Kapp  
Dsc of 456: K. B. Hirashima (573)
- LAGAARD, M. B.**  
See Wyly, L. T. (563)
- LAIRD, MAX O.**  
"Plane Coordinates for Industrial Sites" (576)
- LAKE, J. OWEN**  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)
- LAMB, GEORGE W.**  
Dsc (488) of "Design and Research for Welded Structures" (343)
- LAMB, MILES**  
See Spiegel, Milton (481)
- LAMBE, T. WILLIAM**  
Dsc of 315: E. S. Barber and I. Th. Rosenquist (401)  
Dsc of 315: A. W. Skempton (478)  
Clo (553) of "The Structure of Inorganic Soil" (315)
- LANE, E. W.**  
Dsc of 254: E. E. Dittbrenner; and Emmett M. Laursen and Arthur Toch (479)  
Dsc of 280: Serge Leliavsky; A. Nizery and G. Braudeau; Jose S. Gandolfo; and N. K. Bose (522)  
Clo (479) with W. M. Borland of "River-Bed Scour During Floods" (254)  
Clo (522) of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)
- LARSON, EDWARD W., JR.**  
See Baron, Frank (470)  
See Wyly, L. T. (563)
- LARSON, FRED H.**  
"Humid Area Soils and Moisture Factors for Irrigation Design" (426)  
Dsc of 426: George H. Hargreaves and Harry F. Blaney (522)
- LAURSEN, EMMETT M.**  
Dsc (479) with Arthur Toch of "River-Bed Scour During Floods" (254)
- LEA, NORMAN D.**  
Dsc (572) of "Anchored Bulkheads" (262)
- LEE, CHARLES H.**  
Dsc of 325: William W. Moore and Richard S. Harding (518)  
Clo (553) of "Building Foundations in San Francisco" (325)
- LEE, L. H. N.**  
Dsc of 286: B. Bresler and A. J. Ashdown (429)  
Clo (530) of "Inelastic Behavior of Reinforced Concrete Members Subjected to Short-Time Static Loads" (286)
- LEE, SHUH-CHAI**  
Dsc (568) of "Statistical Theory of Droughts" (439)

# AUTHOR INDEX

- LELIAVSKY, SERGE  
Dsc (522) of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)
- LENHART, BURR  
See Corradi, P. (208)
- LENZEN, K. H.  
See Carter, J. W. (469)  
See Wyly, L. T. (563)
- LEONARDS, GERALD A.  
Dsc of 360: H. J. Gibbs and J. W. Hilf; James K. Mitchell; and Preston T. Bennett and Paul E. Wohlt (518)
- LI, WEN-HSIUNG  
"Interaction Between Well and Aquifer" (578)  
"Open Channels with Nonuniform Discharge" (381)  
Dsc (491) of "Hydraulic Fundamentals of Closed Conduit Spillways" (354)
- LIEBERMAN, JOSEPH A.  
"Treatment and Disposal of Atomic Energy Industry Wastes" (422) with Arthur E. Gorman
- LIN, PIN-NAM  
Dsc (538) of "Analysis of Water Hammer by Characteristics" (274)
- LIN, T. Y.  
See Ivy, R. J. (480)
- LINSLEY, RAY K.  
"Artificial Precipitation Control" (547)  
Dsc (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- LINTON, P.  
Dsc (491) of "Pressure Surge Control at Tracy Pumping Plant" (361)
- LIU, DAVID C.  
See Dames, Trent R. (379)
- LOONEY, CHARLES T. G.  
"Behavior of Structures Subjected to a Forced Vibration" (451)
- LUMIS, HENRY M., III  
See Boyer, Walter C. (504)
- MACDONALD, FRANK W.  
"Pollution of the Mississippi River near New Orleans" (552)
- MACDONALD, GEORGE E.  
"Surveys and Maps for Pipelines" (393)  
Dsc of 393: Norman O. Geuder (525)
- MACDOUGALL, HUGH  
"Waste Disposal at a Steel Plant: Treatment of Sheet and Tin Mill Wastes" (493)
- MAGNUSON, N. C.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- MAKSOUUD, HENRY  
Dsc (479) of "Laminar to Turbulent Flow in a Wide Open Channel" (188)
- MALONEY, F. A.  
See Oliver, J. F. (575)
- MANSUR, CHARLES L.  
Dsc of 324: James F. McNulty; John W. Dunham; and L. D. Graves and J. E. Binckley (478)  
Clo (478) with John A. Focht, Jr., of "Pile Loading Tests, Morganza Floodway Control Structure" (324)  
See Turnbull, W. J. (478)
- MARSH, MARVIN B.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- MARTIN, GUNTHER  
See Schenker, Leo (528)
- MARTIN, PARK H.  
Dsc of 131: Louis P. Blum (436)  
Clo (436) of "The Allegheny Conference--Planning in Action" (131)
- MATEJKA, D. Q.  
See Benedict, P. C. (538)
- MATTESON, DeFOREST A., JR.  
Dsc (563) of "Non-Uniform Torsion of Plate Girders" (449)
- MATTHEW, RAYMOND  
Dsc of 347: G. R. Baker (463)
- MAUGH, L. C.  
See Paulson, James M. (480)
- McCABE, LOUIS C.  
"Sanitary Engineering Aspects of Atmospheric Pollution" (392)  
Dsc of 392: Arthur Pickett (481)
- McCALLEY, R. R., JR.  
Dsc (429) of "Designing Aluminum Alloy Members for Combined End Load and Bending" (300)
- McCAMMON, L. B.  
See Wyly, L. T. (563)
- McCOOL, A. A.  
See Campbell, F. B. (384)
- McFADDEN, GAYLE  
"Airfield Pavement Design of the Corps of Engineers" (458)
- McGAUHEY, P. H.  
Dsc of 302: Arthur W. Furbank (481)
- McILROY, MALCOLM S.  
Dsc of 139: Charles L. Barker (428)  
Clo (428) of "Nonlinear Electrical Analogy for Pipe Networks" (139)
- McKEE, J. E.  
Dsc of 231: Thomas R. Camp, E. W. Steel, and John R. Snell (395)

# AUTHOR INDEX

## McKEE, J. E.

Clo (481) with Vinton W. Bacon of "An Analysis of Water Quality Criteria" (231)

## McKINNEY, ROSS E.

Dsc (437) of "Settling Rates of Suspensions in Solids Contact Units" (186)

## McMASTER, H. M.

Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163)  
Dsc (518) of "Trafficability of Soil as Related to Mobility of Vehicles" (328)  
Dsc (553) with Stanley F. Gizzienski of "Modern Procedures for Underground Investigations" (435)  
Dsc (553) of "Soil Problems in the Southern Piedmont Region" (416)

## McNOWN, JOHN S.

Dsc of 223: Mladen Borele and Turgut Sarpkaya (396)  
Dsc of 258: James R. Barton; M. R. Carstens and John Roberson; Julio Escobar; James J. Hartigan; Sadiq M. Niaz; Ralph W. Powell; and John K. Vennard and Darrell I. Dentoni (396)  
Clo (530) with En-Yun Hsu and Chia-Shun Yih of "Applications of the Relaxation Technique in Fluid Mechanics" (223)  
Clo (530) of "Mechanics of Manifold Flow" (258)

## McNULTY, JAMES F.

Dsc (379) of "Load Tests of Soils in the Miami Area" (215)  
Dsc (478) of "Pile Loading Tests, Morganza Floodway Control Structure" (324)  
Dsc (553) of "Pile Foundations for Buildings" (385)

## McPHERSON, MURRAY B.

See White, Maxwell W. (491)

## MENHINICK, HOWARD K.

"The Training of City Planners" (423)  
Dsc of 423: Jorma J. Salovaara (487)

## MERCHANT, W.

Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)

## MEYER, ADOLF A.

Dsc of 294: George A. Jessop (465)  
Clo (465) of "Recent Additions and Improvements to the Hales Bar Hydroelectric Plant" (294)

## MICHALOS, JAMES

Dsc of 250: William A. Conwell (396)  
Clo (530) of "Numerical Analysis of Frames with Curved Girders" (250)

## MITCHELL, JAMES K.

Dsc (518) of "Strength Characteristics of Compacted Clay" (360)

## MITCHELL, STEWART

See Ivy, R. J. (480)

## MOGGIO, W. A.

"Control and Disposal of Kraft Mill Effluents" (420)

## MOHAMMED, I. A.

"Beam Restraints Provided by Walls with Openings" (529) with E. P. Popov

## MOORE, WILLIAM W.

Dsc (518) with Richard S. Harding of "Building Foundations in San Francisco" (325)

## MORRIS, GIBSON

"An Approach to Hot Laboratory Design" (448)

## MORRIS, HENRY M.

"A New Concept of Flow in Rough Conduits" (390)  
Dsc of 390: V. L. Streeter, Walter Rand, and Harry H. Ambrose (491)  
Clo (491) of "A New Concept of Flow in Rough Conduits" (390)

## MORRISON, I. F.

Dsc of 183: Bernard L. Weiner (397)  
Clo (397) of "Group Loadings Applied to the Analysis of Frames" (183)

## MORTON, R. K.

See Haberman, W. L. (387)

## MOSTAFA, IBRAHIM M.

See Tachau, Herman (430)

## MUELLER, RALPH W.

"Navigation on the Warrior-Tombigbee River System" (414)

## MUNSE, W. H.

"Laboratory Tests of High Tensile Bolted Structural Joints" (441) with D. T. Wright and N. M. Newmark  
Dsc of 441: A. J. Francis (563)

## MURPHY, EDWIN W.

Dsc (379) of "Characteristics of Fixed-Dispersion Cone Valves" (153)

## MURRAY, NOEL W.

Dsc (563) of "Design of Frames by Relaxation of Yield-Hinges" (322)

## MYERS, LLOYD E., JR.

Dsc (391) of "Rice Irrigation in Louisiana" (156)

## NALDER, W. H.

Dsc (463) of "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319)

## NEBOLSINE, ROSS

"Waste Disposal at a Steel Plant: General Problems" (492)

## NEES, LOUIS A.

Dsc (459 and 487) of "Recent Airport Design and Development" (196)  
Dsc (523) with Charles F. Phillips of "Jet Transport Economics--Influence on Airport and Airway" (241)

## NELSON, GEORGE H.

"The Function of the Laboratory in Engineering Construction" (400)



# AUTHOR INDEX

- NELSON, GEORGE H.  
Dsc of 400: John C. Sprague (506)
- NEWMARK, N. M.  
See Munse, W. H. (441)
- NIAZ, SADIQ M.  
Dsc (396) of "Mechanics of Manifold Flow" (256)
- NISHKIAN, B. L.  
Dsc of 259: Clarence S. Jarvis (504)
- NIZERY, A.  
Dsc (522) with G. Braudeau of "Progress Report on Studies on the Design of Stable Channels by the Bureau of Reclamation" (280)
- NOBLE, CHARLES M.  
"Effectiveness of Sand Drains on New Jersey Turnpike" (571) with O. J. Porter  
"Improving the Load Carrying Capacities of Subgrades" (505)
- NUSBAUM, ISADORE  
Dsc (395) of "Sewage Disposal in Tidal Estuaries" (167)
- OAKES, C. K.  
Dsc (568) of "Surface-Water Supply for Irrigation in the Vermilion River Basin, Louisiana" (489)
- O'CONNOR, DONALD J.  
See Eckenfelder, W. Wesley, Jr. (411)
- OLIVER, J. E.  
"A Geometric Problem in Traveling Crane Track Alignment" (575) with F. A. Maloney
- OLKO, STEPHEN M.  
"Some Practical Aspects of Sand Drain Stabilization" (551)
- ORR, DUANE  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- OWEN, W. M.  
Dsc of 188: Yuichi Iwagaki; J. W. Delleur; Ralph W. Powell and Chesley J. Posey; and Henry Maksoud (479)  
Clo (479) of "Laminar to Turbulent Flow in a Wide Open Channel" (188)
- PACKSHAW, S.  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)  
Dsc (572) of "Anchored Bulkheads" (262)
- PALMER, L. A.  
Dsc of 195: R. Horonjeff (401)  
Clo (401) of "Special Procedures for Pavement Design" (195)  
Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163)
- PALO, GEORGE P.  
"Coal-Handling Design for TVA Steam Plants" (412)
- PARMAKIAN, JOHN  
Dsc of 361: C. E. Withers and P. Linton (491)
- PARSONS, JAMES D.  
"Safe Loads on Dog-Leg Piles" (475) with Stanley D. Wilson
- PAULSON, JAMES M.  
Dsc (480) with L. C. Maugh of "Hipped Plate Analysis, Considering Joint Displacement" (182)
- PAYNTER, HENRY M.  
Dsc of 146: E. B. Strouger; George R. Rich; and Donald R. F. Harleman and Edward N. Rein (428)  
Clo (428) of "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146)  
Dsc (465) of "Charts for Designing Air Chambers for Pump Discharge Lines" (273)  
Dsc (538) of "Analysis of Water Hammer by Characteristics" (274)
- PECK, RALPH B.  
"Foundation Conditions in the Cuyahoga River Valley" (513)  
Dsc of 326: Anton Tedesco (478)  
Clo (478) of "Foundation Exploration--Denver Coliseum" (326)
- PEEBLES, JOHN J.  
Dsc of 187: Fred E. Koebel (397)  
Clo (397) of "The Equivalent Rectangle in Prestressed Concrete Design" (187)
- PEERY, DAVID J.  
"An Influence Line Analysis for Suspension Bridges" (558)
- PEI, MING-LUNG  
Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)  
See Cheng, David H. (450)
- PERRI, JOSEPH G.  
Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)
- PETERKA, A. J.  
"Morning-Glory Shaft Spillways: Performance Tests on Prototype and Model" (433)  
Dsc of 433: Fred W. Blaisdell (538)
- PETERSON, ROBERT  
"Studies of Bearpaw Shale at a Damsite in Saskatchewan" (476)
- PHILLIPS, CHARLES F.  
See Nees, Louis A. (523)
- PICKETT, ARTHUR  
Dsc (481) of "Sanitary Engineering Aspects of Atmospheric Pollution" (392)
- PILLSBURY, A. F.  
See Taylor, E. H. (522)
- PODOLAN, J. S.  
See Disario, P. C. (542)
- POLEY, STANLEY  
"Lateral Buckling of Cantilevered I-Beams under Uniform Loads" (527)

# AUTHOR INDEX

- POPOV, E. P.  
See Mohammed, I. A. (529)
- PORTER, O. J.  
See Noble, Charles M. (571)
- POSEY, CHESLEY J.  
See Powell, Ralph W. (188)
- POWELL, RALPH W.  
Dsc (396) of "Mechanics of Manifold Flow" (258)  
Dsc (479) with Chesley J. Posey of "Laminar to Turbulent Flow in a Wide Open Channel" (188)
- QUACKENBUSH, TYLER H.  
"Factors Influencing Irrigation in Humid Areas" (462)
- QUINN, ALFRED O.  
"Photogrammetry and its Application" (581)
- RAAB, N. C.  
See Ivy, R. J. (480)
- RADER, EARLE M.  
"Development of an International Airport" (406)
- RAEDSCHELDERS, H. M.  
Dsc (501) of "Vertical Sand Drains for Stabilization of Muck-Peat Soils" (351)
- RAM, M.  
Dsc (463) of "Some Irrigation and Drainage Problems of Mediterranean and Middle East Countries" (319)
- RAND, WALTER  
Dsc (491) of "A New Concept of Flow in Rough Conduits" (390)
- RANDOLPH, R. R., JR.  
See Kindsvater, Carl E. (382)
- RANKIN, N. S.  
Dsc of 336: Peter Homack (461)  
Clo (481) of "Performance of Biofiltration Plants by Three Methods" (336)
- RANTZ, S. E.  
See Benson, M. A. (568)
- RAY, O. B.  
See Turnbull, W. J. (424)
- REID, WILLIAM  
Dsc of 171: John F. Kraus (436)
- REIN, EDWARD N.  
See Harleman, Donald R. F. (428)
- RHODES, LELAND S.  
Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175)
- RHONE, THOMAS J.  
Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175)
- RICH, GEORGE R.  
Dsc (428) of "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146)
- RICHEY, V. J.  
See Ivy, R. J. (480)
- RIDLEY, J. W.  
Dsc (538) of "Morning-Glory Shaft Spillways: Prototype Behavior" (431)
- RIESBOL, HERBERT S.  
Dsc of 189: Ray K. Linsley, R. W. Gerdel, Harold D. Hafterson, and David M. Rockwood (437)  
Clo (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- RILEY, F. C.  
"The Mapping of Buford Reservoir" (415)  
Dsc of 415: Geo. D. Whitmore (525)
- RING, FRANK, JR.  
"Shielding Structure Facilities for Atomic Energy Research" (447)
- ROBERSON, JOHN  
See Carstens, M. R. (396)
- ROBERTS, C. R.  
"Georgia's Proposed Plat Law" (408)
- ROCKWOOD, DAVID M.  
Dsc (437) of "Snow Hydrology for Multiple-Purpose Reservoirs" (189)
- ROGERS, PAUL  
Dsc (563) of "Field Data for the Structural Design of Coal Bunkers" (430)
- ROHWER, CARL  
Dsc (391) of "Unconfined Ground Water Flow to Multiple Wells" (142)
- ROISIN, V.  
See Verdeyen, J. (572)
- RORABAUGH, M. I.  
Dsc of 362: Raphael G. Kazmann and Abel-Aziz I. Kashaf (491)  
Clo (538) of "Graphical and Theoretical Analysis of Step-Drawdown Test of Artesian Well" (362)
- ROSENQUIST, I. TH. (DR.)  
Dsc (401) of "The Structure of Inorganic Soil" (315)
- ROWE, PETER W.  
"A Soil Pressure Gauge for Laboratory Model Research" (569)
- ROWE, ROBERT S.  
Clo (480) of "The Amplification of Stress in Flexible Steel Arches" (245)
- RUBEY, HARRY  
Dsc (389) of "A Proposed Method for the Transit Lining of High-Speed Track" (271)
- RUBLE, E. J.  
See Higgins, T. R. (485)
- SALGO, MICHAEL N.  
"Examples of Timber Structure Failures" (544)

# AUTHOR INDEX

- SALOVAARA, JORMA J.  
Dsc (487) of "The Training of City Planners" (423)
- SALVADORI, MARIO G.  
Dsc of 291: Robert V. Whitman and Michael R. Horne (480)  
Clo (480) of "Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291)  
See Bleich, H. H. (530)
- SARKARIA, GURMUKH S.  
Dsc (384) of "Design of Side Walls in Chutes and Spillways" (175)
- SARPKAYA, TURGUT  
Dsc (396) of "Applications of the Relaxation Technique in Fluid Mechanics" (223)
- SAVIKKO, E. R.  
See Hechtman, R. A. (484)
- SAVILLE, THORNDIKE  
"National Water Supply" (442)
- SCHACHERL, ROBERT D.  
"Expedient Geometry for the Design of Compound Highway Curves with Connection Spirals" (500) with George J. Berindoague
- SCHEFFEY, C. F.  
See Ivy, R. J. (480)
- SCHENKER, LEO  
"Analog Computers Applied to Elastic-Plastic Systems" (528) with Gunther Martin
- SCHMERTMANN, JOHN H.  
Dsc of 311: Robert L. Crisp, Jr. (401)
- SCHMIDT, MILTON O.  
Dsc (389) of "Surveys and Maps--Vital to the Problems of Mass Transportation" (305)
- SCHNEIDER, LEWIS  
Dsc (397) of "Flexure of Double Cantilever Beams" (158)
- SCHULL, H. W., JR.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- SCHULTZ, E. A.  
"Sediment Sampling in Tidal Waterways" (427)
- SCOTT, HAROLD A.  
"Water Control in Central and Southern Florida" (521)
- SEED, H. B.  
See Trask, Parker D. (477)
- SHUKRY, AHMED  
Dsc (391) of "Unconfined Ground Water Flow to Multiple Wells" (142)
- SHULITS, SAM  
Dsc (384) of "Rating Curves for Flow over Drum Gates" (169)
- SHUTTS, E. E.  
Dsc of 156: Lloyd E. Myers, Jr. (391)  
Clo (391) of "Rice Irrigation in Louisiana" (156)
- SIAO, T. T.  
Dsc (379) of "Characteristics of Fixed-Dispersion Cone Valves" (153)
- SKEMPTON, A. W.  
Dsc (478) of "The Structure of Inorganic Soil" (315)
- SNELL, JOHN R.  
Dsc (395) of "An Analysis of Water Quality Criteria" (231)
- SOEHNGEN, HENRY F.  
Rt "Composting and Grinding" (556)
- SOWERS, GEORGE F.  
"Modern Procedures for Underground Investigations" (435)  
"Soil Problems in the Southern Piedmont Region" (416)  
Dsc of 416: Howard M. McMaster (553)  
Dsc of 435: Howard M. McMaster and Stanley F. Gizienski; W. R. Judd; and Carl W. Fenske (553)  
Dsc (389) of "Methods for Making Highway Soil Surveys" (152)
- SPIEGEL, MILTON  
Dsc (481) with Miles Lamb of "Sewage Aeration Practice in New York City" (307)
- SPRAGUE, JOHN C.  
Dsc (506) of "The Function of the Laboratory in Engineering Construction" (400)
- STAFFORD, PAUL H.  
"Planning an Airport" (410)
- STANLEY, OWEN G.  
Dsc (504) of "Some Economic Aspects of Waterways Projects" (318)
- STEEL, E. W.  
Dsc (395) of "An Analysis of Water Quality Criteria" (231)
- STEINBERG, I. H.  
Dsc (437) of "A Direct Step Method for Computing Water Surface Profiles" (180)
- STEINMAN, D. B.  
"Mackinac Straits Bridge" (559)
- STEWART, R. C.  
Dsc of 328: Howard M. McMaster (518)  
Clo (553) with S. J. Weiss of "Trafficability of Soil as Related to Mobility of Vehicles" (328)
- STEWART, RALPH W.  
Dsc (563) of "Joint Translation by Cantilever Moment Distribution" (298)
- STEWART, W. C.  
"The Work of the Research Council on Riveted and Bolted Joints" (440)

# AUTHOR INDEX

- STONE, RALPH**  
 "Incineration and Alternative Refuse Disposal Processes" (471) with F. R. Bowerman  
 "Infiltration Galleries" (472)
- STOUT, G. E.**  
 See Hudson, H. E., Jr. (428)
- STOVROFF, RICHARD P.**  
 "Capitalizing on Municipal Wastes by Composting" (545)
- STREETER, V. L.**  
 Dsc (491) of "A New Concept of Flow in Rough Conduits" (390)
- STROWGER, E. B.**  
 Dsc (428) of "Electrical Analogies and Electronic Computers: Surge and Water Hammer Problems" (146)
- SUGDEN, HARRY**  
 "Problems Encountered in Improving a Deep Water Harbor" (502)
- SUTHERLAND, R. A.**  
 See Cochrane, H. H. (533)
- SUTTON, JOHN G.**  
 "Drainage in the Humid Areas of the United States" (460)
- SWIGER, W. F.**  
 See Dockstader, E. A. (541)
- SYMONDS, P. S.**  
 Dsc (429) of "Impulsive Motion of Elastoplastic Beams" (287)
- TABITA, ANGELO**  
 "Hydrology Characteristics: Central and Southern Florida Project" (520)
- TACHAU, HERMAN**  
 "Field Data for the Structural Design of Coal Bunkers" (430) with Ibrahim M. Mostafa  
 Dsc of 430: Paul Rogers (563)  
 Dsc (563) of "Design of Frames by Relaxation of Yield-Hinges" (322)
- TALLEY, B. B.**  
 "Development of the Delaware River for Commerce" (503)
- TAMANINI, F. J.**  
 Dsc (488) of "Design and Research for Welded Structures" (343)
- TAYLOR, E. H.**  
 Dsc of 369: R. E. Glover (463)  
 Clo (522) with A. F. Pillsbury, T. O. Ellis, and G. A. Bekey of "Unsteady Flow in Open Type Pipe Irrigation Systems" (369)
- TAYLOR, HENRY W.**  
 Rt "Dumping and Land Fill: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (474)  
 Rt "Garbage Reduction: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (498)  
 Rt "Hog Feeding: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (496)  
 Rt "Incineration: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (497)  
 Rt "Refuse Collection: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (473)  
 Rt "State Activities and Fiscal Aspects: Report of a Subcommittee of the Committee on Refuse Collection and Disposal of the Sanitary Engineering Division" (557)
- TAYLOR, KARL V.**  
 "Foundation Failures in Residences and Small Structures" (561)
- TEDESKO, ANTON**  
 Dsc (478) of "Foundation Exploration--Denver Coliseum" (326)
- TENG, C. Y.**  
 Dsc (553) of "Pile Foundations for Buildings" (385)
- TERZAGHI, KARL**  
 Dsc of 262: T. H. Wu; W. D. Bigler; J. Brinch Hansen; Gregory P. Tschobartoff; Paul Baumann; Rudolf Briske; Norman D. Lea; S. Packshaw; and J. Verdeyen and V. Roisin Clo (572) of "Anchored Bulkheads" (262)  
 Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)
- THOM, H. C. S.**  
 "Frequency of Maximum Wind Speeds" (539)  
 Dsc (568) of "Estimation of Flood Probabilities" (438)
- THOMPSON, THOMAS F.**  
 "Foundation Treatment for Earth Dams on Rock" (548)
- THORFINNSEN, S. T.**  
 "A Large Scale Field Shear Test on a Bentonite Seam" (549)
- THURLIMANN, BRUNO**  
 "Analysis and Tests of a Cylindrical Shell Roof Model" (434) with Bruce G. Johnston
- TOCH, ARTHUR**  
 See Laursen, Emmett M. (479)
- TODD, DAVID K.**  
 Dsc (391) with Lloyd C. Fowler of "Unconfined Ground Water Flow to Multiple Wells" (142)
- TORPEY, WILBUR N.**  
 "Concentration of Combined Primary and Activated Sludges in Separate Thickening Tanks" (443)
- TRACY, H. J.**  
 "Backwater Effects of Open Channel Constrictions" (413) with R. W. Carter  
 Dsc of 413: Paul V. Hodges and Carl F. Izzard (491)

# AUTHOR INDEX

- TRACY, H. J.  
Dsc of 413: Harold R. Henry (538)
- TRASK, PARKER D.  
"Some Applications of Geology in Soil Mechanics and Foundation Engineering" (477) with H. B. Seed
- TSAO, C. H.  
See Grinter, L. E. (563)
- TSCHBOTARIOFF, GREGORY P.  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)  
Dsc (504) of "Design Curves for Anchored Steel Sheet Piling" (165)  
Dsc (572) of "Anchored Bulkheads" (262)
- TULTS, HAROLD  
"Flow Expansion and Pressure Recovery in Fluids" (567)
- TURNBULL, W. J.  
"Base Course and Bituminous Pavement Requirements" (424) with O. B. Ray  
Dsc of 192: P. T. Bennett, John A. Focht, Jr., and W. H. Jervis (478)  
Dsc of 424: E. W. Bauman (523)  
Clo (478) with C. I. Mansur of "Relief Well Systems for Dams and Levees" (192)
- VARTY, H. ORVILLE  
"Airport Terminal Building Design" (421)
- VENNARD, JOHN K.  
Dsc (396) with Darrhl I. Dentoni of "Mechanics of Manifold Flow" (258)
- VERDEYEN, J.  
Dsc (572) with V. Roisin of "Anchored Bulkheads" (262)
- WAGNER, W. E.  
"Morning-Glory Shaft Spillways Determination of Pressure-Controlled Profiles" (432)  
Dsc of 432: Maxwell W. White and Murray B. McPherson (491)  
Dsc of 432: Fred W. Blaisdell; I. M. Mostafa, B. Chanda, and Howard P. Johnson (568)
- WALKER, FRED C.  
"Engineering Problems in Columbia Basin Varved Clay" (515) with W. H. Irwin
- WALTER, D. S.  
Dsc (538) of "Morning-Glory Shaft Spillways: Prototype Behavior" (431)
- WASHBOURNE, LEE B.  
"Planning and Engineering of U. S. Air Force Bases" (457)
- WAY, W. F.  
Dsc (379) of "Field Study of a Sheet-Pile Bulkhead" (155)
- WEIL, N. A.  
See Disario, P. C. (542)
- WEINER, BERNARD L.  
Dsc (397) of "Group Loadings Applied to the Analysis of Frames" (183)
- WEISS, S. J.  
See Stewart, R. C. (553)
- WHETSTONE, GEORGE A.  
"The Economics of Paralleling Pipe" (537)  
Dsc (538) of "Friction Factors for Turbulent Flow in Pipes" (197)
- WHITE, MAXWELL W.  
Dsc (491) with Murray B. McPherson of "Morning-Glory Shaft Spillways: Determination of Pressure-Controlled Profiles" (432)
- WHITLOCK, ERNEST W.  
Rt "Report of Committee on Water Supply Engineering of the Sanitary Engineering Division for the Period Ending September 30, 1953" (388)
- WHITMAN, ROBERT V.  
Dsc (480) of "Lateral Buckling of I Beams Under Thrust and Unequal End Moments" (291)
- WHITMORE, GEO. D.  
Dsc (525) of "The Mapping of Buford Reservoir" (415)
- WILLIAMS, G. M. J.  
Dsc (459) of "A Comparison of Design Methods for Airfield Pavements" (163)
- WILLIAMS, NORMAN F.  
"Prospective Sites for Large Steam Plants" (464)
- WILSEY, EDWARD F.  
"Flow in Open Channels" (466)  
Dsc of 197: George A. Whetstone (538)
- WILSON, FRANCIS J.  
Dsc (504) with N. R. Graham of "Some Economic Aspects of Waterways Projects" (318)
- WILSON, STANLEY D.  
See Parsons, James D. (475)
- WINTER, GEORGE  
Dsc (532) of "Plastic Deformation of Wide-Flange Beam Columns" (330)  
See Bijlaard, P. P. (532)
- WITHERS, C. E.  
Dsc (465) of "Charts for Designing Air Chambers for Pump Discharge Lines" (273)  
Dsc (491) of "Pressure Surge Control at Tracy Pumping Plant" (361)
- WOHLT, PAUL E.  
See Bennett, Preston T. (518)
- WOLOSEWICK, F. E.  
Dsc of 158: Lu-Shien Hu, Lewis Schneider, Ray W. Clough, and William A. Conwell (397)  
Clo (397) of "Flexure of Double Cantilever Beams" (158)
- WOOD, FRANK B.  
"Reservoir Malaria Control and Sanitation Problems" (399)

# AUTHOR INDEX

WOOD, FRANK B.

Dsc of 399: S. Leary Jones (481)

WOOD, R. H.

Dsc (530) of "Plates with Boundary Conditions of Elastic Support" (199)

WOODRUFF, GLENN B.

Dsc (480) of "Live Loading for Long-Span Highway Bridges" (198)

See Dickey, Walter L. (540)

WOODS, K. B.

Dsc of 152: George F. Sowers (389)

Clo (389) of "Methods for Making Highway Soil Surveys" (152)

WOODWARD, LOUIS A.

"Photogrammetry in City Planning and Operations" (574)

WOODWARD, RICHARD J.

See Krynine, D. P. (501)

WRIGHT, D. T.

See Munse, W. H. (441)

WU, T. H.

Dsc (572) of "Anchored Bulkheads" (262)

WYLY, L. T.

Dsc of 219: Almon H. Fuller (397)

Clo (563) with M. B. Lagaard, R. W. Kluge, K. H. Lenzen, E. W. Larson, Jr., and L. B. McCammon of "Investigation of the Dead Load Stresses in the Mississippi River Veterans Memorial Bridge at East St. Louis, Illinois" (219)

See Carter, J. W. (469)

WYSS, GUIDO

Dsc (384) of "Rating Curves for Flow over Drum Gates" (169)

YIH, CHIA-SHUN

See McNown, John S. (530)

YOUNG, R. D.

See Hechtman, R. A. (484)

YOUNGQUIST, R. CLIFFORD

Dsc (479) of "High Velocity Tests in a Penstock" (297)

ZACK, SAMUEL I.

"Recent Pennsylvania Experiences of Authority Sewage Works Financing" (453)





## PROCEEDINGS-SEPARATES

The technical papers published in the past year are presented below. Technical-division sponsorship is indicated by an abbreviation at the end of each Separate Number, the symbols referring to: Air Transport (AT), City Planning (CP), Construction (CO), Engineering Mechanics (EM), Highway (HW), Hydraulics (HY), Irrigation and Drainage (IR), Power (PO), Sanitary Engineering (SA), Soil Mechanics and Foundations (SM), Structural (ST), Surveying and Mapping (SU), and Waterways (WW) divisions. For titles and order coupons, refer to the appropriate issue of "Civil Engineering" or write for a cumulative price list.

### VOLUME 79 (1953)

DECEMBER: 359(AT), 360(SM), 361(HY), 362(HY), 363(SM), 364(HY), 365(HY), 366(HY), 367(SU)<sup>c</sup>, 368(WW)<sup>c</sup>, 369(IR), 370(AT)<sup>c</sup>, 371(SM)<sup>c</sup>, 372(CO)<sup>c</sup>, 373(ST)<sup>c</sup>, 374(EM)<sup>c</sup>, 375(EM), 376(EM), 377(SA)<sup>c</sup>, 378(PO)<sup>c</sup>.

### VOLUME 80 (1954)

JANUARY: 379(SM)<sup>c</sup>, 380(HY), 381(HY), 382(HY), 383(HY), 384(HY)<sup>c</sup>, 385(SM), 386(SM), 387(EM), 388(SA), 389(SU)<sup>c</sup>, 390(HY), 391(IR)<sup>c</sup>, 392(SA), 393(SU), 394(AT), 395(SA)<sup>c</sup>, 396(EM)<sup>c</sup>, 397(ST)<sup>c</sup>.

FEBRUARY: 398(IR)<sup>d</sup>, 399(SA)<sup>d</sup>, 400(CO)<sup>d</sup>, 401(SM)<sup>c</sup>, 402(AT)<sup>d</sup>, 403(AT)<sup>d</sup>, 404(IR)<sup>d</sup>, 405(PO)<sup>d</sup>, 406(AT)<sup>d</sup>, 407(SU)<sup>d</sup>, 408(SU)<sup>d</sup>, 409(WW)<sup>d</sup>, 410(AT)<sup>d</sup>, 411(SA)<sup>d</sup>, 412(PO)<sup>d</sup>, 413(HY)<sup>d</sup>.

MARCH: 414(WW)<sup>d</sup>, 415(SU)<sup>d</sup>, 416(SM)<sup>d</sup>, 417(SM)<sup>d</sup>, 418(AT)<sup>d</sup>, 419(SA)<sup>d</sup>, 420(SA)<sup>d</sup>, 421(AT)<sup>d</sup>, 422(SA)<sup>d</sup>, 423(CP)<sup>d</sup>, 424(AT)<sup>d</sup>, 425(SM)<sup>d</sup>, 426(IR)<sup>d</sup>, 427(WW)<sup>d</sup>.

APRIL: 428(HY)<sup>c</sup>, 429(EM)<sup>c</sup>, 430(ST), 431(HY), 432(HY), 433(HY), 434(ST).

MAY: 435(SM), 436(CP)<sup>c</sup>, 437(HY)<sup>c</sup>, 438(HY), 439(HY), 440(ST), 441(ST), 442(SA), 443(SA).

JUNE: 444(SM)<sup>e</sup>, 445(SM)<sup>e</sup>, 446(ST)<sup>e</sup>, 447(ST)<sup>e</sup>, 448(ST)<sup>e</sup>, 449(ST)<sup>e</sup>, 450(ST)<sup>e</sup>, 451(ST)<sup>e</sup>, 452(SA)<sup>e</sup>, 453(SA)<sup>e</sup>, 454(SA)<sup>e</sup>, 455(SA)<sup>e</sup>, 456(SM)<sup>e</sup>.

JULY: 457(AT), 458(AT), 459(AT)<sup>c</sup>, 460(IR), 461(IR), 462(IR), 463(IR)<sup>c</sup>, 464(PO), 465(PO)<sup>c</sup>.

AUGUST: 466(HY), 467(HY), 468(ST), 469(ST), 470(ST), 471(SA), 472(SA), 473(SA), 474(SA), 475(SM), 476(SM), 477(SM), 478(SM)<sup>c</sup>, 479(HY)<sup>c</sup>, 480(ST)<sup>c</sup>, 481(SA)<sup>c</sup>, 482(HY), 483(HY).

SEPTEMBER: 484(ST), 485(ST), 486(ST), 487(CP)<sup>c</sup>, 488(ST)<sup>c</sup>, 489(HY), 490(HY), 491(HY)<sup>c</sup>, 492(SA), 493(SA), 494(SA), 495(SA), 496(SA), 497(SA), 498(SA), 499(HW), 500(HW), 501(HW)<sup>c</sup>, 502(WW), 503(WW), 504(WW)<sup>c</sup>, 505(CO), 506(CO)<sup>c</sup>, 507(CP), 508(CP), 509(CP), 510(CP), 511(CP).

OCTOBER: 512(SM), 513(SM), 514(SM), 515(SM), 516(SM), 517(PO), 518(SM)<sup>c</sup>, 519(IR), 520(IR), 521(IR), 522(IR)<sup>c</sup>, 523(AT)<sup>c</sup>, 524(SU), 525(SU)<sup>c</sup>, 526(EM), 527(EM), 528(EM), 529(EM), 530(EM)<sup>c</sup>, 531(EM), 532(EM)<sup>c</sup>, 533(PO).

NOVEMBER: 534(HY), 535(HY), 536(HY), 537(HY), 538(HY)<sup>c</sup>, 539(ST), 540(ST), 541(ST), 542(ST), 543(ST), 544(ST), 545(SA), 546(SA), 547(SA), 548(SM), 549(SM), 550(SM), 551(SM), 552(SA), 553(SM)<sup>c</sup>, 554(SA), 555(SA), 556(SA), 557(SA).

DECEMBER: 558(ST), 559(ST), 560(ST), 561(ST), 562(ST), 563(ST)<sup>c</sup>, 564(HY), 565(HY), 566(HY), 567(HY), 568(HY)<sup>c</sup>, 569(SM), 570(SM), 571(SM), 572(SM)<sup>c</sup>, 573(SM)<sup>c</sup>, 574(SU), 575(SU), 576(SU), 577(SU), 578(HY), 579(ST), 580(SU), 581(SU), 582(Index).

c. Discussion of several papers, grouped by Divisions.

d. Presented at the Atlanta (Ga.) Convention of the Society in February, 1954.

e. Presented at the Atlantic City (N.J.) Convention in June, 1954.

# AMERICAN SOCIETY OF CIVIL ENGINEERS

## OFFICERS FOR 1955

### PRESIDENT

WILLIAM ROY GLIDDEN

### VICE-PRESIDENTS

*Term expires October, 1955:*

ENOCH R. NEEDLES  
MASON G. LOCKWOOD

*Term expires October, 1956:*

FRANK L. WEAVER  
LOUIS R. HOWSON

### DIRECTORS

*Term expires October, 1955:*

CHARLES B. MOLINEAUX  
MERCEL J. SHELTON  
A. A. K. BOOTH  
CARL G. PAULSEN  
LLOYD D. KNAPP  
GLENN W. HOLCOMB  
FRANCIS M. DAWSON

*Term expires October, 1956:*

WILLIAM S. LaLONDE, JR.  
OLIVER W. HARTWELL  
THOMAS C. SHEDD  
SAMUEL B. MORRIS  
ERNEST W. CARLTON  
RAYMOND F. DAWSON

*Term expires October, 1957:*

JEWELL M. GARRELTS  
FREDERICK H. PAULSON  
GEORGE S. RICHARDSON  
DON M. CORBETT  
GRAHAM P. WILLOUGHBY  
LAWRENCE A. ELSENER

### PAST-PRESIDENTS

*Members of the Board*

WALTER L. HUBER

DANIEL V. TERRELL

---

### EXECUTIVE SECRETARY

WILLIAM N. CAREY

### ASSISTANT SECRETARY

E. L. CHANDLER

### TREASURER

CHARLES E. TROUT

### ASSISTANT TREASURER

CARLTON S. PROCTOR

---

## PROCEEDINGS OF THE SOCIETY

HAROLD T. LARSEN

*Manager of Technical Publications*

DEFOREST A. MATTESON, JR.

*Editor of Technical Publications*

PAUL A. PARISI

*Assoc. Editor of Technical Publications*

---

### COMMITTEE ON PUBLICATIONS

SAMUEL B. MORRIS, *Chairman*

JEWELL M. GARRELTS, *Vice-Chairman*

GLENN W. HOLCOMB

ERNEST W. CARLTON

OLIVER W. HARTWELL

DON M. CORBETT